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Merger & Acquisition Real Estate Strategies for Global Companies, Introducing a New Way of Working After the COVID-19 Pandemic

Master Thesis

International Master of Science in Construction and Real Estate Management

Joint Study Programme of Metropolia UAS and HTW Berlin

Faculty 2

from

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Date:

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Acknowledgement

Never underestimate the opportunities that are presented in your way. This thesis is not only the end of a phase but the beginning of a brand new life, full of new people, more knowledge and even more courage to make my dreams come true. Thank you so much to the professors, Mika Lindholm and Ammar Al-Saleh, for sharing your knowledge to complete this master's degree.

I cannot be more grateful to my mom, who always supported me and encouraged me to make my dreams come true. My brother that was by my side whenever I needed him. With my partner-in-crime, my boyfriend Antonio, who was always by my side, and of course my dad and grandma Emmis!

Griselda Lammoglia Kirsch

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Conceptual Formulation

Master Thesis for Ms Griselda Lammoglia Kirsch

Student number s0576656

Topic

Merger & Acquisition Real Estate Strategies for Global Companies, Introducing a New Way of Working After the COVID-19 Pandemic.

Background

Globalisation and the Covid-19 pandemic have modified modern companies more than any other aspect through time, making businesses focus on hyper-competition and search for strategies that can integrate as many services as possible in the fastest possible way. One of the most common ways of expanding a business to be integrated into different parts of the world and achieving the challenges brought by globalisation is through mergers and acquisitions (M&A). By bringing together the strengths and solving upcoming challenges as one, local and small businesses and significant and international companies can achieve better and faster profits. However, one of the first questions that arise when M&A happens is, "Where will the headquarters be?". So to answer this and several additional strategic M&A questions, the corporate real estate team appears on the map.

In the last 15 years, corporate real estate (CRE) has been classified as a critical strategic function that requires a global focus on local actions. When M&A occur, its importance is potentialised since corporate and essential function locations are duplicated. The main objectives of M&As are to generate savings and optimise profits. Several opportunities for both can be achieved with the real estate strategies proposed and executed by the CRE.

In addition, the Covid-19 pandemic brought a brand-new way of utilising spaces by making incredibly fast adaptions and modifying lease agreements. However, what if M&As are taken as opportunities to make the best adaption of this "new real estate way of working"?

Research goal and expected results

The research goal of this study is to analyse the M&A real estate strategies that can bring as much savings as possible, including the new way of working that resulted after the Covid-19 pandemic. After deep analysis, a global strategy proposal will be determined so companies can follow to define real estate savings and synergies in the short and long term. This strategy will be based only on numbers and hard data (such as distance between sites, occupancy, size and use) and has a corporate view. A detailed business review will be needed to achieve the proposed strategy, and the local management team will approve individual proposals.

Methodology

Type: Quantitative deductive strategy by synergy proposal including a new working method.

With the help of literature, understand the different types of CRE approaches to define the pros and cons of each type. After determining the optimal CRE organisation approach for M&A, explain the best organisational strategy to plan and execute the M&A developing plan. After responsibilities and tasks are defined, the process will be settled. The idea is to include existing sites in a holistic less-than-xx-years-plan for optimal and most efficient space utilisation. Nevertheless, the business target and user preferences will be prioritised so the areas can achieve their original scope.

Then, the proposed strategy will be verified with the ongoing merger of the companies Cargotec – Konecranes as a case study.

Research questions

This study aims to answer the following research questions:

1. What is the CRE's role in M&As?
2. Which types of CRE can optimise the results of an M&A?
3. Which is the best CRE approach to achieve the best results in an M&A?
4. Which CRE synergies and strategies can be followed in an M&A?
5. Which parameters should be included in the CRE M&A strategy?
6. What is the value-added of having the CRE synergies and design in an M&A?
7. What best approach should these strategies follow to achieve the business approvals?
8. What are the challenges and limitations of these synergies and strategies?
9. What could be the virtual dashboard guidelines to create the CRE M&A strategy?

Signature of the Supervisor
Mika Lindholm, Helsinki Metropolia UAS, Finland

Abstract

This thesis describes and gives an example of a strategy the corporate real estate area of global companies can follow to achieve the required savings in the time needed during a merger or acquisition. This strategy aims to create business cases where each asset involved in the merger will be assigned to a synergy plan. The synergies can be a colocation, space efficiency, benchmarking, closure or no change. The CRE manager will set the synergies depending on the site´s location, size, primary use, and the number of employees. At the end of the site–data analysis, the strategy will give results as possible savings over a period of time, including risk probabilities and approval process flow.

First, the main concepts and background of corporate real estate are studied. Then, the mergers and acquisitions are defined, including their stages, aspects and how managers measure their success. The critical element that combines these two elements (CRE & M&A) is described in chapter four, CRE's role in M&As. The integration planning is where the CRE team develops information to feed the merger results. The CRE managers put together all the needed information through the integration phase, analyse each site, and assign them a synergy strategy. These tasks must be inside the timeline of the holistic integration team (including all areas of both companies). In addition, a detailed approval process has to be on track, starting with internal CRE approval, then the integration team, followed by top management. Then the business cases have to be cascaded into local targets since local businesses (with the support of the CRE team) will be in charge of bringing these strategies into reality.

This thesis uses a desktop case study with thirty-four sites from Finland. It demonstrates that the strategy could achieve the required reporting time savings with the available resources. The outcomes of the method described in this thesis are part of the integration plan. Its execution and success will depend on each company's top and local management that decides how, when and who will apply it. In addition, a deep understanding of the local business from the CRE team is crucial to achieving the promised results for the M&A.

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List of Abbreviations

CRE: Corporate Real Estate

CREM : Corporate Real Estate Manager

CT: Cargotec

EVA : Economic Value Added

FM : Facility Management

HQ: Headquarters

IFM : Integrated Facility Management

IPO : Initial Public Offer

IRR : Internal Rate of Return

KAS : Kalmar Automated solutions

KC: Konecranes

KPIs : Key Performance Indicators

M&A : Merger & acquisitions

NPV : Net Present Value

REM: Real Estate Manager

SPOC: Single Point of Contact

TBC: To be confirmed

1. Introduction

1.1 Research Purpose

The main goal of this research study is to analyse the M&A real estate strategies that can bring as much savings as possible, including the new way of working that resulted after the Covid-19 pandemic. After deep analysis, a global strategy proposal will be determined so companies can follow to define real estate savings and synergies in the short and long term. This strategy will be based only on numbers and hard data (such as distance between sites, occupancy, size and use) and has a corporate view. A detailed business review will be needed, and the local management team will approve individual proposals to achieve the proposed strategy.

1.2 Research Question

This master thesis will answer the following questions related to CRE in M&As:

1. What is the CRE role in M&As?
2. Which types of CRE can optimise the results of an M&A?
3. Which is the best CRE approach to achieve the best results in an M&A?
4. Which CRE synergies and strategies can be followed in an M&A?
5. Which parameters should be included in the CRE M&A strategy?
6. What is the value-added of CRE synergies and strategies in an M&A?
7. What approach should these strategies follow to achieve business approvals?
8. What are the challenges of these synergies and strategies?
9. What virtual tools could use be to create the CRE M&A strategy?

1.3 Research Methodology

Type: Quantitative deductive strategy by synergy proposal including a new way of working.

With the help of literature, understand the different types of CRE approaches to define the pros and cons of each type. After determining the optimal CRE organisation approach for M&A, explain the best organisational strategy to plan and execute the M&A developing plan. After responsibilities and tasks are defined, the process will be settled. The idea is to include existing sites in a holistic less-than-xx-years-plan for optimal and most efficient space utilisation. Nevertheless, the business target and user preferences will be prioritised so the areas can achieve their original scope.

Then, the proposed strategy will be verified with the ongoing merger of the companies Cargotec – Konecranes as a case study.

2. Corporate Real Estate

2.1 Definition & background

Global companies tend to have a centralised team that makes the most critical decisions and defines the main objectives, strategies, and visions. Corporate-level positions oversee these tasks. The corporate real estate (CRE) area is considered a relatively new corporate section inside these main-decision positions. The primary functions are related to assets, buildings, and parcels in companies whose main income is not associated with real estate management (Kofi Gavu, 2015). It is a dynamic profession with a wide range of property-related tasks to handle, manage, and optimise the space that houses its activities and business (Cornet Global Inc., 2015).

According to the local institute of real estate business of Germany, corporate real estate management is the “value and success-oriented acquisition, handling and disposal of properties underuse or possession of corporations” (Glatte, 2020). A company’s real estate assets can be either leased or owned. Since CRE managers work closely with other corporate functions (like finance, IT, RH or marketing), the Corporate Real Estate Managers (CREM) tend to work with the top management team, generally under the umbrella of the Chief Financial Officer (CFO). The main tasks of the CREM are to supervise all the assets’ acquisition, use, maintenance, and disposal processes. However, this area has partnered with top management to add strategic value to workplace solutions in the last ten years by using the space more efficiently and defining guidelines to improve the chain supply (Cornet Global Inc., 2015).

On average, between 25% & 30% of the initial investment in a company is real estate investment-related. The importance of CRE relies on economic benefits by optimal utilisation of assets and the creation of strategies to achieve the company’s primary targets. These strategies must be directly linked with the work environment/facility management focus to have a holistic understanding of the asset and the most significant benefit it can give to the employees developing the primary tasks of the supply chain (Kofi Gavu, 2015).

The beginning of real estate management was back in the days of feudalism. The king owned the company and had several feudal to “manage” the land. However, Real Estate Management started to appear in organigrams and research documents until the 1980s (Kofi Gavu, 2015). The awareness of having an integrated real estate strategy is dated to 1983 when the authors Zeckhauser and Silverman stated that many corporate assets (from 25% to 41%) are related to property investment. Six years later, Veale published an article demonstrating that 10% to 20% of the monthly expenses are related to facilities and their usage or 41% to 50% of net operating income. Over the next fifteen years, several authors continue investigating the best structure to include in the CRE area. Some propose a centralised department, a hybrid management approach, and others a completely external management overview of real estate assets (Manning and Roulac, 1999). Figure 02 shows the types of CRE structure and tasks.

2.2 Taxonomy

Starting in the 90s, CRE had its boom in companies and business strategies. However, after that significant success, its popularity decreased until the real estate crisis in 2008. It is a common habit to have a CRE area from then onwards (Glatte, 2020).

Figure 01 shows the CRE taxonomy proposed by Germany’s local institute of real estate business. In this figure, companies are divided into three columns. The first shows companies whose core business and corporate strategy is the real estate market. The second and third are non-property company models where the core business defines real estate needs. This figure also shows that all companies must develop similar tasks, affecting operational and strategic results. However, the biggest challenge for CRE teams inside companies with different core businesses is facing market challenges and adapting their strategies to the central core of the business. The secret to achieving the best results is complete transparency in the property portfolio, processes and cost structures. However, the reality is that the core business mandates real estate decisions without efficiency and market valuation, resulting in a massive portfolio with inefficient sites, unutilised space and excessive costs related to facilities & assets (Glatte, 2020).

Like all other departments in a company, CRE should focus on flexible, efficient and high ROI assets that can host as many employees as possible with the best quality of space at the lowest price. To achieve this, the author Thoma Glatte mentions in his book “Essentials of Corporate Real Estate Management” that the CRE target should be measured economically, dividing it into three:

a) Performance (procurement, inventory, production and sales)
b) Financial (liquidity, investing and financing)
c) Success (turnover, earning and profitability)

The usage, physical requirements, legal aspects, and economic factors involved in an asset will define whether the company should buy/lease it, continue its use, or dispose of it. So CREM needs to be included in the central core of the company to achieve economic targets efficiently and influence future business decisions.

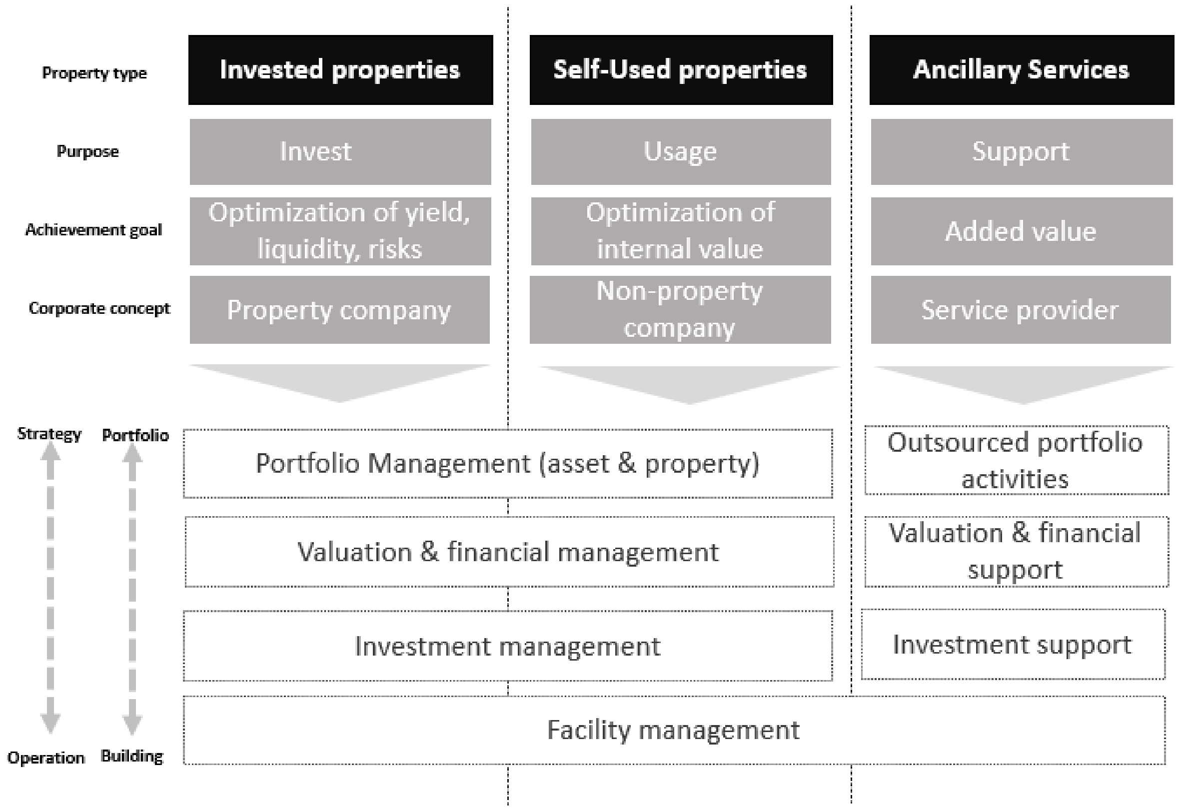


Figure 1: Taxonomy of Real Estate, The Importance of Corporate Real Estate Management in Overall Corporate Strategies, Thomas Gates, 2020.

To define what focus CRE should follow, Marta O’Mara describes in her book “Strategy and Place, Managing Corporate Real Estate and Facilities for Competitive Advantage” describe three generic strategies that will support companies through different operational climates (O´Mara, 1999):

a) **Incremental**: this strategy is recommended when the organisation´s future has several uncertainties. Procurement and use of space should be gradual, betting on modest sites with short lease terms. Significant commitments should be avoided or delayed until the company´s future has more certainty.

b) **Value-Based**: once the enterprise portfolio is well defined, CRE is used to determine and express the company´s values, goals and culture. The objectives are to shape employees’ behaviour and fix the clients’ portfolios according to locations and the sites’ environment. The help of layout definition, style, and general aspects of the site setting will encourage this.

c) **Standardisation:** a strategy focused on control, cost and space efficiency. By defining strict guidelines and application procedures, all aspects of the real estate portfolio will follow a clear path. These standards will be applied in space allocation and layout, furniture systems, or other real estate operations.

2.3 Types

There is no ideal or most recommended type of CRE department or organisation. Each company should adapt their targets and goals with the CRE that fits the better. In the following sections, I will describe roughly every kind and possible task to be included. However, in the following chapters, when we refer to CRE, I am referring to centralised since it is the one that can influence business decisions the most.

Several factors like micro and macroeconomic conditions, technology, sustainability, outsourcing plan, globalisation, and demographics should be analysed to define which CRE type best fits a company. The real estate business should be understood more like a proactive department, with cost-focused strategies contributing directly to the company and reporting to the c-suite or senior corporate managers (Cornet Global Inc., 2015).

The first study related to corporate real estate, written by Zeckhauser and Silverman in 1983, mentioned the first three types. The RICs (Royal Institution of Chartered Surveyors) added the fourth type. These initial classifications assign the organisational arrangement a focus on personnel and responsibility/decision-making. The author Veale in 1989, added profit and cost centres to the categories (RICS, Parliament Square, 2018).

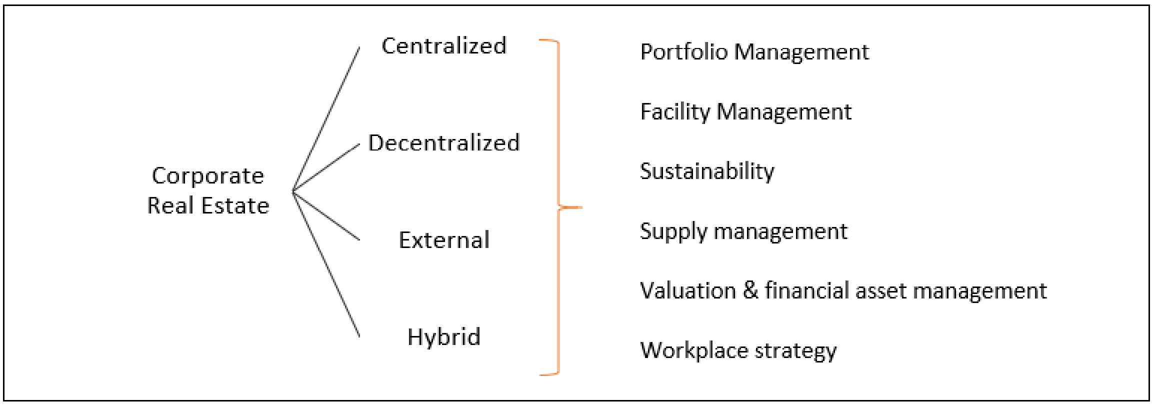


Figure 2 Types & tasks of CRE, RICs Parliament Square, London SW1P 3AD., 2018

The focus of all CRE types is described simply in a white paper of the real estate firm JLL named: Better by Design: Reshaping the CRE Function for Greater Impact. There is no one fit for all focus. However, a mixed-function can be selected. The idea is that the area's focus aligns with the short-term goals and general business strategy.

a) **Functional:** the CRE department follows merely the business area requirements that demand the services.

b) **Geographical**: according to the location of sites and their countries. It can also focus on the continental or regional market.

c) **Process:** defines administrative and internal procedures for the real estate process. It is not involved in the decision-making or business approvals.

d) **Costumer:** generally used when the business is new or the rivalry is winning in the market. The idea is to benchmark and win terrain over the others.

Centralised Corporate Real Estate

The real estate team is located at the headquarters reporting directly (or at most two-level lower) to the CFO. One centralised portfolio in a data management system is controlled & supervised directly by the portfolio manager. This position approves all acquisitions, leases and disposals. In addition, facility, sustainability and construction managers review projects, portfolios and tasks with a holistic view, defining strategies for company-level results. Centralised CRE is used in large global enterprises. Its focus is typically functional, or customer and several areas depend on them. For example, a site ID is created after signing a lease agreement. It is the same ID that finance, IT, HR, and other areas will assign employees and resources to a site. (Source: my experience working at Cargotec).

Decentralised Corporate Real Estate.

They can be physically located at each site (or in a country/regional or business unit management location). Real estate managers do not exist under that title; instead, local management makes the property decisions, and either controllers or the maintenance management team manages other supervision (Cornet Global Inc., 2015). Tasks like furniture purchase, space layout, maintenance and space budget allocation are the responsibility of each product department. For special projects, externals are contracted. Local management oversees the execution and defines the budget (Tay and Liow, 2006).

External Corporate Real Estate (outsourcing).

If the central area of the company is not real estate related, all real estate activities can be outsourced. When top management is looking for cost reduction, focusing more on other strategic moves, having more business flexibility, or the existing employee portfolio needs to acquire a particular capability, having CRE services as external is a convenient option (Cornet Global Inc., 2015). While outsourcing, local or top management teams define the Key Performance Indicators (KPIs) to track the outsourced activities, especially when the Integrated Facility Management approach is used. However, no internal personnel are assigned to develop any real estate tasks. The company members select a real estate provider (CBRE, JLL, Cushman & Wakefield, or similar), share the needs, and track results (Tucker and Masuri, 2016).

The market offers three types of outsourcing models related to real estate:

a) **Multi-provider:** has a different provider for each task, requiring a procurement process for hiring each new service. It is recommended for management to have closer supervision of the activities.
b) **Single-provider**: one supplier delivering multiple services. IFM is inside this category
c) **Integrated**: both the CRE team and the external RE company look for the best interest of the whole company. Additional services are already included in the initial contract since it is expected that the scope is not limited.

Hybrid Corporate Real Estate

Nowadays is the most commonly used since it gives a good balance between the three other types, approached in large and medium companies, where only one or no representatives are inside the headquarters. C-seniors have a global view of the portfolio, but they do not run any decisions. Nevertheless, they will review the overall transactions and approve projects developed by local teams. Local/independent business management directed and controlled budgets and regional portfolios, and external help is used for specific activities (Personal experience while working at Cargotec).

The outsourced activities vary depending on the enterprise size and the strategy for approaching CRE goals. In a survey done by KPMG in 2013, the most common task to outsource related to CRE is lease agreement abstraction (77% of the interviewed companies). Following data entry, lease administration and critical dates tracking. Regarding facilities, either the management positions (maintenance, receptionist, janitorial, etc.) and services (HVAC, electrical, IT, etc.) (Cornet Global Inc., 2015).

2.4 Functions

Several factors interfere with the total amount of tasks relied on the CRE team, including the enterprise size and the type and focus of the CRE area. Nevertheless, they can be included in other areas (finance, procurement, or local management). By having the detailed function distributed according to the company´s strategy, the main KPIs of the company can be achieved. The most common goals the CRE have are:

a) **Space efficiency:** is calculated, creating a ratio between the total leased/owned square meters and the total amount of headcount. The efficiency value can be tracked/evaluated differently, either global, regional or local.

b) **Expansion/reduction of portfolio:** depending on the enterprise lifecycle, the KPIs can either look for assets all around the globe to leverage the brand or reduce the number of real estate elements to keep the presence in the region while reducing costs.

c) **Savings:** target is to optimise the company´s assets as much as possible.

d) **Sustainability**: like CO_2 reduction, location focus, transportation or services.

Portfolio Management

It is about having the updated list of assets, including history, actual status and plans of all the lands and properties used by the company. The properties can be owned or leased, internal or external, used or serviced. The data this area needs to have is: 1) main local contact point, 2) lease agreements or ownership documentation, 3) drawings and plans of buildings, 4) exact location, 5) the number of square meters, 6) amenities, 7) primary use, 8) parking detail, 9) additional payment (like maintenance or light services), 10) headcount & 11) sublease agreements. The first tool managers used for this record was a simple excel/google sheets file. However, a dedicated tool in global/big companies, like Optimaze, SpacePlanner, and others, is highly recommended.

These tools allow management to track all the updates quickly, and several controlled users input the information as the changes happen. Top managers can easily access general and detailed RE information by generating specific reports and showing holistic calculations and compilations. In addition, space planning tools are encouraged since space efficiency (one of the most important KPIs of real estate) is tracked and reported instantaneously. Before 2019, the efficiency target was between 12 & 14 sqm per headcount. However, after Covid 19 pandemic, several companies realised that office-located people could work from home without affecting their results or efficiency. After doing home office for almost two years, it is estimated that the white-collar population in offices can be reduced daily by 1/3. Having strategies like in a week, two days at home, three at the office and still, have working space for all the employees.

Nevertheless, it is a significant change from how we have worked for the last 100 years. Even though future savings can be achieved due to leasing/owning less space, initial investment should be made so offices are adapted to this new way of working. Strategies like sit sharing, open working spaces and gathering rooms for hybrid meetings are needed so all employees can correctly develop their daily tasks. CRE team can / should define the required strategy according to the company’s policies for adapting to this new way of working.

In centralised CRE, the portfolio manager position/task should be involved from the early beginning of all asset negotiations. The most common process is that the business shares the needs of the desired asset, and the portfolio manager flows the request to their team. The brokerage team can be either internal or outsourced. Negotiations, approvals, timing, and budget achievement can be either responsibility of the local business or the portfolio manager. However, the CRE top manager should be one of the approvers every time an asset is either acquired or disposed. Once the documentation is signed, CRE creates and owns the site's internal name, so all the other areas (like HR, IT, and finance) can assign employees and services to the site with the same reference. Once the internal site name is created, the ownership documentation/lease agreement is sent to abstraction and conversations with the local team continue since queries can be raised.

Communication between CRE and local teams should maintain a close distance during the asset's complete lifetime since the real estate agreements are a living entity, meaning they change through time. Typical changes are:

- Rent increase/decrease
- Contract termination
- Change of contact point
- Cubleases
- Amendments or addendums.
- Increase/decrease of headcount
- And so on

Once the asset is about to get disposed of, the CREM and the local team have the needed conversations with the landlord/future owner, and once they agree to all the terms and conditions, the real estate head approves the disposal. It is recommended not to delete the record of disposing of assets. Most of the property administration tools have particular tabs for archived files for future consultation can be done.

Facility Management

FM is needed between the acquisition of the asset and its disposal, used to keep and increase the property’s value by leveraging its usage. For corporate purposes, it delivers operational and strategic objectives. It can be measured with safety and efficient use of the working environment as a daily task. When FM is included inside CRE, a holistic application of the FM strategy is needed. The integrated Facility Model (IFM) is one of the most common strategies used in corporate-level solutions. By defining guidelines and corporate principles, the FM tasks in CRE can influence (CoreNet Global, Inc., 2015):

- Sustainability programs
- Energy & supply/procurement
- Maintenance
- Janitorial services
- Move management
- Catering and hospitality
- Environment, health & safety
- Business support services
- Security

Valuation & financial asset management

Financial elements in CRE can be asset and liability related, representing a significant value in the enterprise cost centres. To give top management assertive advice, CREM needs to fully understand financial risks, its management and how to get the actual value and future potential of all the used assets (CoreNet Global, Inc., 2015). Prepare and provide property research valuation to advise the business to make the correct and informed decisions. First, the CREM needs to understand the purpose of the required valuation (tax payment, benchmarking, subleasing or selling). A fast analysis can be done if the CREM is familiarised with the existing valuation methods and techniques (RICs, Parliament Square, 2018).

The main financial concepts and applications a CREM needs to develop are:

a) **Cashflow**: for real estate projects in a certain period

b) **Discount rate**: for risk reflection

c) **Net Present Value (NPV)**: used to compare the investment return in two different moments in a timeline.

d) I**nternal Rate of Return (IRR)**: define any investment's profitability after a finite time.

e) **Economic Value Added (EVA)**: the immediate monetary addition of investment’s value to the asset. Benefits can come from external elements, such as the sublease of the asset´s section or sales increase.

f) **Payback period**: the amount of time investment needed to reach the desired profitability.

(CoreNet Global, Inc., 2015)

Workplace & performance management

Workplace definition needs to offer a guideline to define where business core activities can be developed and have a competitive standard with the market. Hence, employees feel comfortable doing these tasks and are willing to stay as the company grows. Financial and other enterprise branches have tracked and measured their workplace and areas’ performance to develop strategies and take future decisions. CRE needs to consider what elements will contribute to the defined corporate KPIs and cascade them into CRE KPIs. The steps to determine the management KPIs are:

1. Establish internal or external benchmarking: tracking a single asset through a particular period or comparing several facilities to obtain the actual number. “What is not measured can not be improved” - William Thomson Kelvin, 1824
2. Define targets according to business, organisational or facilities functions. Efficiency, sustainability or savings are the most common ones.
3. Evaluate the measures & communicate the results.

(CoreNet Global, Inc., 2015)

2.5 Globalisation

Globalisation is a mandatory topic when a global company is analysed since it is how the business reached this title. All planning levels of the company require a local and universal understanding of its strategies and need to be more flexible and defined than a local business. Corporate managers need to understand regional laws and regulations to determine a global strategy; however, local cultural practices will influence how this strategy will be achieved (Harvey, Too, & Too, 2010). Sounds like a significant challenge, no? So, why do companies still aim to be global? Once again, it is an answer to globalisation. If an enterprise wants to grow and be a threat to its competitors, expansion is the solution; the globe is the battlefield. Three factors will encourage a manager to push his company to the global market: 1) Increase in economic aspects, 2) Political, meaning the liberation of the production factor inputs & 3) Technological, meaning that communications and transportation innovations offer expansion as operational, economic efficiency. Companies need to modify how they define the market, transforming the workplace into a workspace and constantly evolving its environment pushed by macroeconomic forces. In an international project to research the future of CRE, CoreNet Global, the global association for corporate real estate, interviewed hundreds of CRE leaders for them to give their opinion about the profession´s future. Senior leaders focus their answers on technology tools, sustainability, outsourcing, portfolio optimisation and global asset management (CoreNet Global, Inc., 2015).

For this reason, managers should not see globalisation as having locations everywhere. Instead, strategies must be focused on allocating resources in tactical positions worldwide, aligned with local conditions but linked to CRE´s global KPIs and guidelines. “Think globally but act locally” - Patrick Geddes, 1915. A hypercompetitive environment pushes the need to propose fast and flexible solutions. These advantages should be a series of minor and temporary changes to keep competitors in a reactive mode. CRE competencies need flexible networking to apply in transitory arrangements, enhance learning, and improve their markets. The concept of dynamic capabilities is the basis of this adaptation mode. It should be encouraged in the CRE area and in all the departments in the company to adapt to global continued changes. (Harvey, Too, & Too, 2010).

Because of economic liberalisation, all enterprises can directly compete with any other similar worldwide. The hypercompetitive environment has pushed companies to adapt to structures that work globally. One economical solution to collaborate with globalisation is redefining the corporate structure, which can occur at a local, regional or international level. There are five corporate restructuring strategies (Mendes de Araújo, Silva, Sá e Silva, & Pereira, 2018):

a) **Merger & acquisitions (M&A)**: a company is absorbed by another business entity or two enterprises are combined to form a brand new third company. This strategy happens when both companies are in a strait financial status, or their business is quite similar, and several synergies can be achieved.

b) **Reverse merger:** happens when a private company wants to be classified as a public one listed on the stock market without an Initial Public Offer (IPO)—purchasing a controlling share of a public company absolves the control of the public´s company board of directors.

c) **Divestiture**: also called divestment, is to sell or liquidate a business unit or section of the company to a third party as subsidiaries or intellectual property. The sale can be made as a trade, auction, forming a spin-off (creating a new, independent company), or issuing an IPO.

d) **Joint venture:** when several businesses create a new strategy entity. Both companies agree to share the new business' expenses, so the new company's profit and control will be shared.

e) **Strategic alliance:** two or more companies get together to achieve specific goals related to one business that all are involved. Both companies will follow their organisation and business plan but add new targets.

The strategy analysed in this thesis is M&A since it has the highest market growth and profits returns. In addition, CRE can be involved the most, and the benefits of the area can be potentialised due to flexibility in solutions, meaning synergy variety.

3. Mergers & acquisitions

3.1 Definition

According to the Cambridge English dictionary, a *merger* is a joining of business firms, and a synonym can be a “fusion”. A merger is a combination of several enterprises where each element has the same stake in the NewCo (we will refer to this as the result of an M&A). However, in practice, executives can have plans to expand one company more than the other due to external factors like the corporate image or political or financial reasons. One example is the equal fusion between Chrysler & Diamler in 1998. After ten years of pushing the merger together, “cultural mismatches” of the American and german ways of working exploded, miss selling Chrystler’s shares (Snow, 2011).

An *acquisition* is an act of acquiring, buying or getting something. In the business restructuring language is when a big company (with more thresholds for turnover, more fixed and current assets or a higher amount of employees) acquires or buys a smaller company or section of it. By acquiring complete enterprises, production lines, and divisions, to mention some examples, a company bypass the process of growing and go directly to profits and existing sales. Introducing a brand new element to the market or launching a new product might be cheaper than buying it when it already has a time rolling. However, clients will take time to recognise this new element in the market. That is the step companies want to skip and go directly to the profit part (Snow, 2011).

M&A is also a completely independent industry. Advisory and consulting companies like PwC, Deloitte, KPMG, EY or BCG sell M&A strategies and analysis. Since “every deal is different and the path to success is, by definition, always unique” (Delloite M&A services front webpage), they have specialised organisations dedicated to advising companies when, with who, how, and the benefits of having an M&A. There are legal, regional and global standards and conventions applied to all particular kinds of M&A, including taxation and defined KPIs to establish the success of this strategy. (Snow, 2011).

History and future

Selling, buying, and combining companies are practices as old as the company concept. However, if we want to review the past of M&S, an essential step was when they started to have a genuine business impact. Even though some analysis was done, prework was needed. And I mean real prework, allocating resources and budget. Before the 1990s, the terms *integration planning*, *execution integration and due diligence* were entirely unknown to the companies involved in M&As. Timothy J. Galpin mentions that before they were launched 15 years ago, these tasks were done only after the NewCo legal closure was completed. The pre-M&A investment was not needed, and vital aspects of the fusion, like culture or personnel coexistence, were not evaluated until day one arrived. This led to a significant percentage of failure in M&As. The adaption for integration took time since the do´s and don´ts were unclear at the beginning of the process, especially when announcements were made. M&As mean closing sites and firing people, so the timing for launching information is crucial. Detailed and vigorous effective planning is the key to the success of an M&A. (Galpin, 2018)

The National Bureau of Economic Research studied 12,203 M&As and showed that more than $200billions was lost in the last 20 years. KPMG defines that 83% of the M&As didn´t bring additional shareholder values, and A. T. Kearney mentioned the previous ten years' results of the average total returns on M&As were negative. On average, enterprises spend more than $2 trillion per year on M&As and still, the failure is between 70% & 90% (Christensen, Richard, Curtis, & Waldeck, 2011). So, why do companies insist on merging and acquiring other businesses? Because when they win, the reward is big! In addition, globalisation and economic barriers to organic expansion have encouraged M&As as a growth strategy for companies. It is a way to buy/associate with other organisations to gain control over the market´s services and products. Factors like market demand for flexibility, fast demand for revenue return from stakeholders and diversity in emerging companies have pushed M&As to the top strategy for increasing a business profit. And to finalise, the last market demands it to make these M&As as fast as the organisation´s capability can do it. In the past, the average time for an M&A to be completed was three or four years. Today, the results should be reflected in six or twelve months to be considered a successful strategy. (Galpin, 2018)

Challenges

For an M&A to be successful, NewCo needs to increase the shareholder value faster than without any corporate restructuring. The typical path for M&As is that once the strategic opportunity is detected, a consultancy service is hired by all the involved parties. The consultancy team will analyse all the M&As pros and cons and deliver an initial report showing the estimated benefits/losses after the required period. These reports are used as a decision-making document so stakeholders can approve the M & M&A and move forward. The first challenge to have in mind is *Game Day,* or the day of the announcement. When all the members, including investors, stakeholders and employees, start thinking, what about me? The destruction of the company's value begins here since uncertainty is immediately added to the value of the NewCo. As observed in the numbers on the previous page, M&As success happens just in specific strategies. After the announcement, the integration should be planned and deployed. But for this early stage to be completed successfully, all the stakeholders should have willing and great expectations, budgets and resources allocated to design, integrate and deploy the strategies. Here is the second challenge that the M&A will face. (Galpin, 2018)

The third, and for the M&A I was involved with, the one that brought the strategy down is the approvals from international authorities. When two significant businesses want to come together, an analysis to avoid market monopoly must be done. After the permissions and integration plans are done, DayOne will come. After this day, everything will work according to the new standards and requirements. However, if the integration is not developed correctly, the expected benefits will not arrive on time. And the strategy will be classified as a failure. To avoid the previous, managers should focus on the following (Galpin, 2018):

a) M&As are a single, end-to-end business process in charge of a transaction and will affect all aspects of all the companies involved.
b) Integration should be analysed and planned as good or even better than the M&A by the integration team before announcements are made.
c) Involved companies should deploy an M&A competency plan since it is a competitive advantage for the success of the M&A.

3.2 Stages

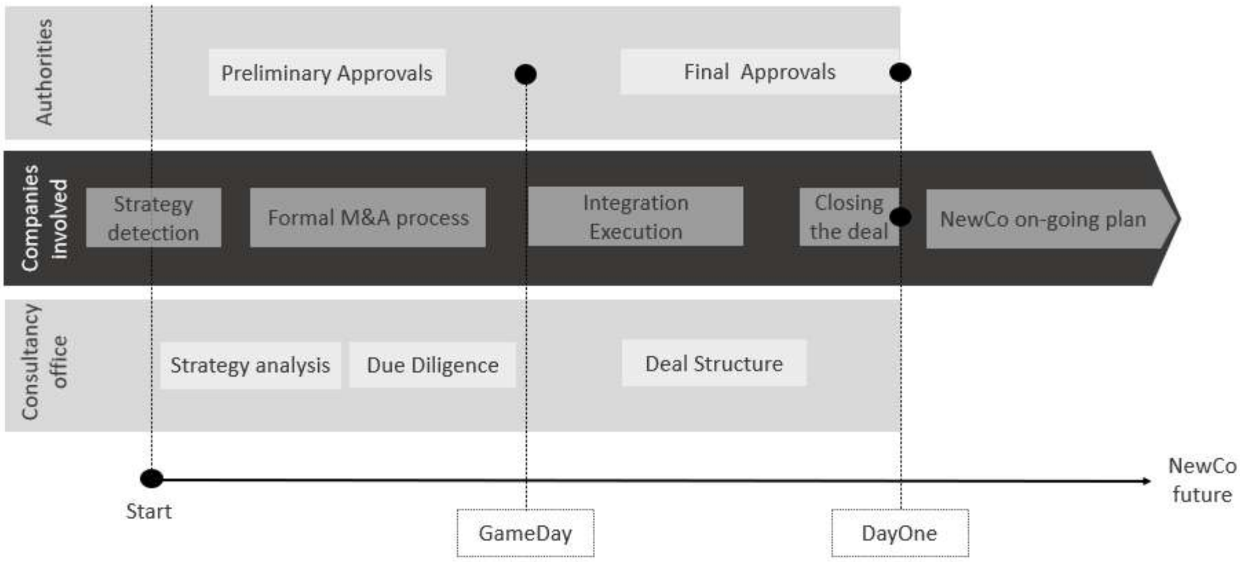


Figure 3: Parts & tasks for an M&A, a summary of the following three sections, by author.

Figure 3 illustrates the summary of the parties involved during the whole process of an M&A. The party that starts the entire process is the company that detects the possible merger or acquisition. Before moving forward, a consultancy office is hired to run the numbers. The companies involved will share the actual numbers, and the consultancy buro will show the possible benefits of the strategy. While the external analysis is done, the preliminary approvals from external authorities begin. In addition, the formal M&A strategy is internally defined by the parties involved. After the M&A has more or less shaped and defined targets, it is announced to its main stakeholders and employees. Sometimes this announcement is made to the world the same day as a press launch or global communication. After this announcement, the integration and due diligence process start. These parts already involve some investment and resources allocated, so since this day, the M&A investment began. Once the due diligence is done, the consultancy company can start defining and closing the deal structure since the signature of this document will represent the start of *DayOne*. The authorities will evaluate the final deal agreement, the integration plan, and previous studies to give the final approval. *DayOne* will be defined in the integration planning since all the stakeholders need to have very clear in mind this day. The synergy preparation and integration execution will work to have everything ready for this day.

3.3 Aspects

Financial aspects

Value creation is the final objective of restructuring an organisation. This is created by combining elements of involved parties in an M&A to achieve financial goals, including mission, vision and resources. Very romantic and utopic strategy. To achieve this value creation, *synergies* should be completed. *Synergies* are the crucial element of this thesis. According to the Cambridge dictionary, a synergy is the combined power of a group of components that work/perform together more significantly than the total results reached by each element working separately. +When we translate this meaning into the M&A world. Synergies are needed to achieve the expected results. The financial principle to achieve successful M&As is to have higher profits with less operational expenses in a defined period. “Focus on value creation, not just in integration” (Christensen, Richard, Curtis, & Waldeck, 2011). The most significant upgrade for the involved companies will be achieved by achieving all the possible synergies in a company. The classification of these synergies is related to the following:

a) **Shared support services**: both companies do not need different platforms/facilities/resources to achieve some of the same results. For example, instead of paying two contracts for several suppliers, they can extend one of the contracts and add extra savings.
b) **Shared suppliers & customers portfolio**: What comes in or what comes out can be combined into more efficient shifts. Instead of asking for two orders of two tons of raw paper for carton production, where two separate shipping payments will be made, a single wholesale order can be done instead.
c) **There are fewer resources and the same results:** only one is needed instead of two CEOs or CFOs. This will apply to the whole NewCo organisational chart.
d) **Instant geographical expansion**: to take advantage of the separate companies’ international market independently, expecting to increase revenue.

Before *GameDay,* a determined amount of cost synergy should be determined. During integration, synergies should be detailed, chosen, planned, allocated resources and budget, and finally, after DayOne, track process for achievement. (Galpin, 2018)

Personnel / Cultural aspects

Finding organisations with a similar or compatible way of working and achieving targets is one of the biggest challenges in an M&A. The first question is how to identify a potential M&A company with a compatible culture? According to Tim Galpin, each separate business' original mission and vision will give a rough idea. However, the real value will not be created until all capabilities are transferred from one company. The collaboration to achieve the goal of merging both cultural environments is a task manager should will and cascade through strategy definition. This means the M&A goal should be measured in numbers and incorporate working atmosphere measures, like how comfortable the people adapt to the changes and how efficient they feel with the new adaptions. “To find the ideal culture fit”, Buono & Bowditch, 1989, is the best solution. Top managers need to trigger and support employees' tolerance for diversity and give a margin of time and budget for learning and adapting to the new strategies. They need to leave space for mistakes and small failures (Salama, Holland, & Vinten, 2005). These aspects are more challenging when companies are from different countries. One example is the Chrysler – Diamler merger. The most significant contact zone was the will to combine the American and German working methods. Both of them work perfectly separately. Germany and USA are two of the biggest economies in the world. However, when cultural combinations started, their independent, successful defined business structures failed (Galpin, 2018).

However, to have a good reason will move even the highest mountain. It will highly influence the company members' interaction, increase communication, and develop confidence for all parties to express themselves clearly and on time. A dangerous weapon in M&As is the accumulation of frustration. When one part of the fusion does not feel integrated enough, it will only represent useless expenses for the integration budget and M&A results. The whole adaptation process is called the *acculturative* adaption and should be considered at the same level of importance as the strategic financial value of the merger strategy. Once the integration team is defined, a crucial member to integrate is the chairman in charge of cultural differentiation and organisational forces for integration. This person controls all the human resources and personnel topics inside the M&A (Salama, Holland, & Vinten, 2005).

Legal aspects

Due diligence is the first task on the to-do list of an M&A attorney. All the legal aspects of the strategy are defined in this document. Here, the buyer/acquisitor/merger part 1 digs deep into the other potential offers and actual numbers to understand what the NewCo can achieve. It is a way to verify the parties' data and see if the contract and terms of the M&S will work. (Galpin, 2018). Once the backgrounds of all parties are crystal clear, the deal needs to be prepared. External attornies generally do this since it is where the rights and responsibilities of all parties will be determined. It will include the approval process for stakeholders, new tax margins, and transferability of liability. Also, warranties and compliance standards are defined in this section since all parts are committed to particular targets at a specific time. Detailed structural elements, organisational arrangement, and corporate definitions are included since they are critical to defining the integration plan before *DayOne.* The closing conditions and target indemnification are also crucial to have all the terms and conditions from an early stage of the arrangement (Patel, 2022).

Approvals are the third legal aspect. After *GameDay,* this may take up to two years to complete. Nevertheless, all the top twenty mergers that happened between 1998 & 2003 were ten months. These approvals are from national and international regulatory reviews, like European Union scrutiny, chambers and private sectors that might be affected by the fusion. This approval process is critical since it will affect the value added to the M&A and the budget for integrating and developing it. Elements like non-competes, non-solicits, and no market domination, among others, must be approved to be accomplished with the free trade market regulations (Salama, Holland, & Vinten, 2005). Conditional approvals can be given. For example, with the Cargotec – Konecranes merger, the European Union conditionally approved the merger with the restriction that a Kalmar Automatic Solutions (KAS) business unit was divested from the fusion. This divestment included all elements attached to the business unit. So the fusion was able to continue and was partially approved after Cargotec proposed this solution to the European Union Commission. Nevertheless, the UK Commission was not satisfied with the suggested solution and pushed the stakeholders to cancel the fusion, causing a loss of €125millions related to merger integration investment.

3.4 Measurement systems

One critical element that sends M&As to failure is that their long-term targets are very utopic, and the paths to achieving them are pretty generic. Financing and investment internal teams should get together with the consultancy company to define realistic and tangible targets for the merger. The most common metrics to reach are:

a) **Hard synergies**: referred to the potential savings an M&A can have, measured as a percentage of the total expenses. The idea is to increase the profit by lowering the production expenses of the central core business services or products.

b) **Soft synergies**: Profit or revenue increase. This is not necessarily the sum of all the companies' values, but the addition to the rise of sales/revenue the brands can achieve together.

As previously mentioned, synergies can be done in all aspects of a company's supply chain or element. The idea is to create operational efficiencies related to sharing the best collaborating practices. In addition, expanding the NewCo throughout the world will give the strategy more visibility, and more qualified talent will be brought to the open positions. The possibility to open to new markets since the actual ones may reduce risks and redefine supply chain strategies taking advantage of the recently acquired locations, like maximising the potential of low-cost factories/production centres (Patel, 2022).

However, the synergy performance should be tracked when the M&A success is settled for the deal signature. The Esmerald Group, one of the most prominent publishing and investigation groups in Europe, researched to understand the factors to measure a company's restructuring strategy's success. Most answered that it was related to performance tracking and went beyond financial outcomes, especially if we talk about short-term financial aspects. Once they are reached, the M&A should also reflect the success. The overall success should also track the completion of proposed synergies, achieve the suggested implementation and conclude the organisational integration. So companies need to use a more holistic success measure to track financial and non-financial aspects. Senior managers interviewed by the Esmalrd Group for their assessment suggested the extent to which the management board expectations were achieved or not. For this assessment, they offer these twelve variables are to be reviewed (Papadakis, 2005) :

1. Variation in profits
2. Sales
3. Market share
4. Stock price
5. Borrowing ability
6. Capital cost
7. Finance cost
8. Investment opportunities
9. Competitive position
10. R&D
11. Innovation
12. Personnel development possibilities

Sadly, most organisations that have decided to have an M&A have failed to track and develop the previously mentioned solutions. The collapse in result tracking and measures element can end catastrophically, even cancelling all the plans right before *DayOne*. Tim Galpin explains that the previous measurements are not the only ones. Additionally, organisations must track “people´s reactions and how things adapt”. Human reaction measurements are crucial, like surveys, interviews, focus groups, and good counsel, especially in the fast-paced daily environment. Galpin suggests tracking the following KPIs, which are a combination of the twelve factors mentioned previously (Papadakis, 2005):

1. Integration process performance
2. Overall acquisition performance
3. Employee retention

4. Customer retention
5. Accounting performance
6. Long-term financial performance
7. Short-term financial performance
8. Acquisition survival
9. Innovation performance
10. Knowledge transfer
11. Systems conversion
12. Variation in market share

The following figure shows the division of the KPIs that can be measured. According to the M&A focus, most of the time is related to financial interest, but interests and factors can be divided into four aspects. The KPIs need to be defined according to the strategy that is required. In some cases, the company want to grow and improve its market share, so a financial approach should be taken. A cultural approach should be reached if the focus is on customers' and employees' improvement (Galpin, 2018).

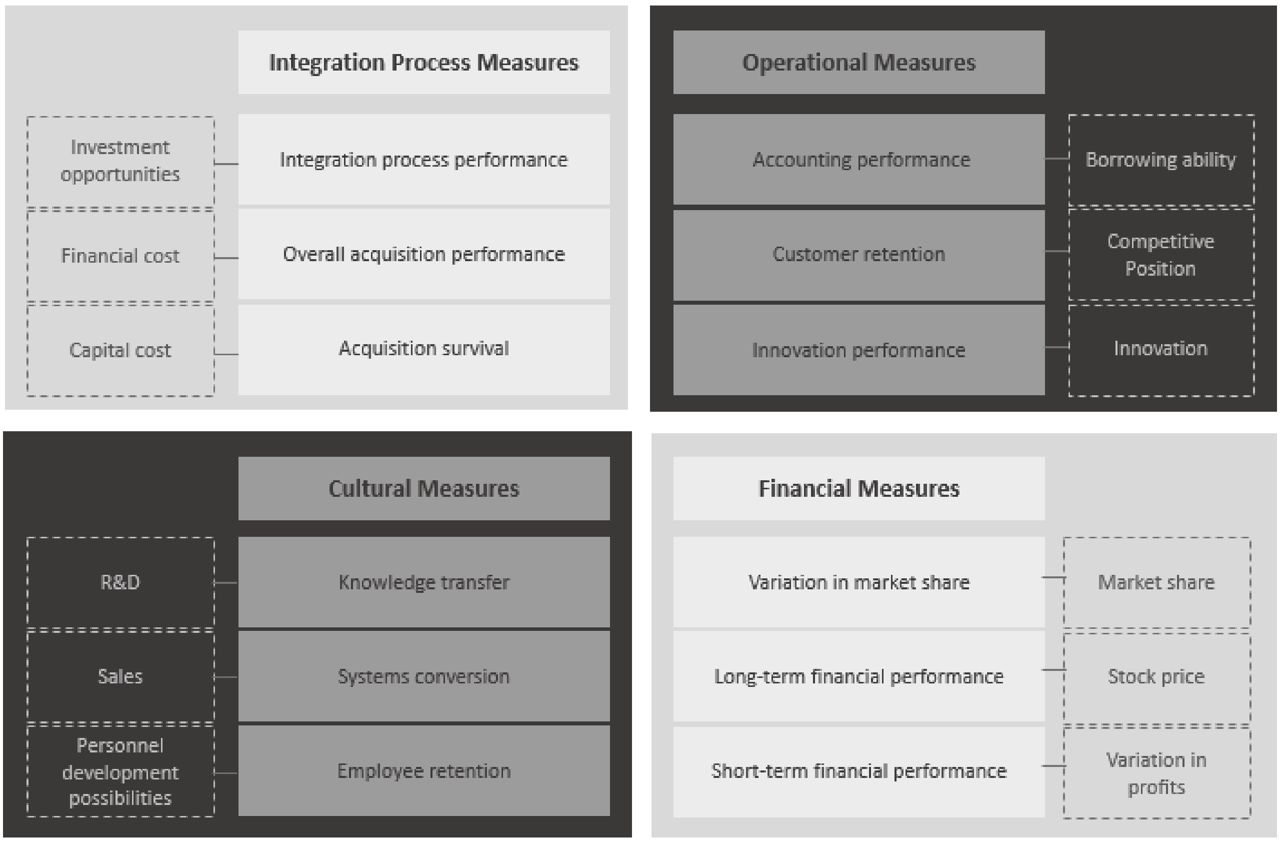


Figure 4 Concept, aspects and factors of KPIs, by author.

4. CRE role in M&As

As mentioned in the previous chapters, CRE is a critical team when developing an M&A integration plan since this corporate restructuring strategy has been developing and increasing since the first half of 2020. The real estate market has a significant correlation with the M&A due to the movement and opening/closure of real estate deals that go together with the strategy. A correlation of 77% between the global CRE investment and global M&As deal value from 20202 and 2021. Also, experts are pretty enthusiastic this correlation may increase in the following years since the economic recovery after covid 19 pandemic will point to faster growth of existing companies (Kallenvret, 2021).

So, why CRE is important in an M&A? Real estate is the third expense on an enterprise price statement. Since M&A growing trend will continue during this and the following short-term year, companies will look for the best strategies to optimise their portfolio and integrate technology, operations, and lease agreements. Real estate savings can represent 16% to 22% of savings in an M&A, demonstrating a significant synergy potential. The idea is to create as many as possible consolidations and eliminate the redundant locations (Borland, 2022). But how to choose the ideal location? The main factors will be analysed in the following chapters. Nevertheless, the main objective of the synergy definition is adapting to the new standards of the NewCo. An updated portfolio will increase the revenue and improve the talent attracted to the business.

From another perspective, adapting to the new way of working introduced by the covid-19 pandemic will improve the space quality where employees develop their everyday tasks, and space efficiency can be improved. According to Kelsi Maree Borland, a journalist focused on the commercial real estate industry, policies to work from home will turn the market in two directions. Either company will want to expand their real estate portfolio o decrease it (Borland, 2022). M&As are the perfect occasion to introduce these aspects since the complete corporate visual identity will change. However, the sites’ primary usage needs to be understood in depth to start the analysis.

4.1 Objectives & targets

While defining the M&A CRE strategy, managers must consider that they will affect the rest of the company teams. Despite the financial benefits, these synergies strongly influence how NewCo will focus its operational and strategic objectives. For this reason, CRE managers must continuously communicate with corporate attorneys, lawyers, counsels and finance professionals. The aim is to work together to add significant value to the fusion by having holistic synergies encouraged by space efficiency. The main driver to look for CRE synergies is achieving the desired geographic coverage expansion with low-cost capital, increasing revenue, tax inversion strategies and capturing market share (Allegro Inc, 2014).

Nevertheless, CRE managers are not involved early or deep enough while developing the M&A strategy, arguing that “real estate is an afterthought”. If this happens, potential shareholder value related to the CRE portfolio is wasted, despite the previously mentioned in this section (Allegro Inc, 2014). In my personal experience, while developing the merger integration strategy for the Cargotec (CT) & Konecranes (KC) strategy, a vital factor in the strategy definition’s success was to have all the correct managers from the beginning of the feasibility studies. The consultancy company involved gave the preliminary potential savings from the initial moments of the M&A. In 2020, right after the *GameDay* happened, the consultors showed the potential synergies represented by financial figures. These numbers were taken from the database and statistical studies of their experience with M&As.

By comparing similar fusion savings for similar companies in the cargo market, the preliminary report assigned the potential savings tasks for the real estate portfolio for five million savings in the next three years. The following chapters will describe how the CRE team in CT, with the help of the KC data, managed to have a detailed strategy to achieve and exceed the requested savings. To start with the strategy definition, we have to understand that companies have several kinds of spaces. Then, we will describe how this strategy included the “New Way of Working” rules applied to workplaces after the covid-19 pandemic. Once the area is assigned, deep local business analysis needs to be done. One thing the CRE global managers can see in an Excel file and another completely different is what happens on the sites. However, the initial proposal needs to come from complex data, and arguments must be on the table to achieve all the synergies.

4.2 Integration planning

The most critical element for an M&A to succeed is having a complete and detailed integration plan to execute the needed tasks. But what is included in that plan? Who is involved? When and how it should be developed? The following categories collect together all the needed elements so the integration team can do a plan, together with tangible targets and resources to be allocated. As a general recommendation, the integration team should be involved from the beginning in all the areas of both companies, having a representative that will include just the needed resources in the integration team. The approach is similar to a project, so a defined timeline, budget, and resource definition have been necessary since GameDay. Even Project MS is highly recommended to track progress and delays. The top management of this integration team can be an external company hired by both companies with access to all data and employees. This core team will support and guide the integration elements into one path, defining preliminary submissions to achieve DayOne and forward plans and targets (Galpin, 2018).

Workflow and fundamental operating rules

It is a document where the core integration team collects all the rules, legal requirements, and possible integration outcomes. It lists instructions and process transitions to ensure operations are together without any problem. A detailed list of tasks to be done by each member to enforce the agreement will serve as the primary communication tool for all the staff involved. Also, all the roles and responsibilities are included even if they will not change in the NewCo, or the description will be the same. A brief description of the transaction process alignment steps. The element to highlight in this integration is the contact roster of the main point of contact for both companies responsible for collecting basic information and developing the integration plan. First, the company's services will be described, then all the details and specifications, like requirements. Then operational rules, costs, allocation of costs, positions definitions and the detailed transition plan. Here can also be included the consumers' impact and its transaction plan (Galpin, 2018).

The elements to be included are:

1. **Services required for integration**: give a short description of the platforms and general services needed to start with the integration. Actual and future suppliers, physical and software specifications, maintenance needs and contracts, and user´s handbook (including access plan and dates).

2. **Key process operating rules:** is divided into phases, depending on the integration stage. Define the basic methods of communication, the main objective of the process, personnel involved, who owns it, main metrics to be tracked and all the activities that will support and depend on this process.

3. **Corporate Analysis Roles / Strategy:** define the business model the NewCo will follow. Used to detect, develop and follow up synergies. Will determine the top management, scorecards and responsibilities.

4. **Company roles and responsibilities**: define each position, organisational chart, responsibilities review, contacts directories and workflow chart.

5. **Payroll accounting:** rules applied to formal employees starting on DayOne, including the new compensation plan, cost allocation and people in charge.

6. **Transaction timeline:** define the dates when the NewCo will pay their employees. The detailed plan will also require responsible management to overview and background tasks, like a compilation of bank accounts under new contracts and corroboration of correctness.

7. **Customer relation transition plan**: used to maintain the customer portfolio by offering the same quality of products/services. A personalised customer service dedicated to the integration plan is recommended, so clients can call and solve all the doubts related to the NewCo and future changes.

Synergies – quick hits and low-hanging fruits.

The integration core team must define the synergy strategy early to achieve the promised savings. All integration teams must focus on short-term actions to accomplish the synergy plan and draft a high-level proposal for long-term, high-impact strategies. This thesis's primary focus will briefly describe how to achieve generic synergies in this section. Nevertheless, in the following chapters, we will analyse how real estate strategies are defined, approved and completed. The elements to be included in each synergy description are (Galpin, 2018):

1. **Description:** We have x and y, but the NewCo just needs x to achieve the same results.

2. **Value**: accumulative savings the M&A defined period of transition estimated in dollars or euros.

3. **Responsibility:** team and single point of contact (SPOC). This SPOC will be sharing all the preliminary submission information to the core integration team related to its team.

4. **Supporting functions**: as it is a change inside the entire organisation, all the possible areas that can be affected by the synergy should be included from the beginning. For example, for real estate synergies, departments like RH, marketing, IT or finance should communicate continuously with the CRE team.

5. **Approach and milestones:** what is expected from each synergy despite financial benefits, like efficiency, supplier list reduction or reduction in delivery times. The approach will demonstrate the team's path while developing the synergy.

6. **Verification**: define a budget for the synergy, including the resources to be allocated. After *DayOne,* the integration core team needs to go back to the proposals, and review is an accomplishment. After the defined time, compare the targets with the results in the NewCo.

Initial systems and facilities requirements

This topic is not reviewed in detail in this thesis, nevertheless is an aspect where CRE is responsible. The idea is to reduce the disruptions on DayOne. Together with the human resources and IT departments, all the new guidelines must be defined to keep the security and safety, avoiding delays in the tasks developed by all the employees. When we talk about a global company, the CRE (generally the CRE FM) manager in charge of the assignment will divide the globe into functional regions, assigning a regional manager. That regional manager will have all the local contacts for each site. They will be in charge of implementing the needed changes in employees' security and safety elements. The critical factors in this equation are the new people allocated to a facility (Galpin, 2018).

Critical elements to include are:

1. Safety and security guidelines for the NewCo
2. The identification process for entering the premises
3. Connectivity availability and portal access to all the NewCo members
4. Apply the changes to e-mail, employees number and payslip policies
5. Space allocation and space distribution
6. Onboarding strategy, including safety training for the new site.
7. Social integration of all the members

Transition cost estimate

In Appendix A, you can observe a suggested table by the author of *The Complete Guide to Mergers and Acquisitions,* Timothy Galpin, which includes all the financial elements in deciding where the headquarters of a NewCo are relocating. Nevertheless, this analysis needs to be done to all the synergies proposed. The idea is to show why an additional investment is required to achieve the suggested synergy. Have background and reasons where the cost will be originated, demonstrating each element's market price, the reason for its purchase, and the estimate's basis. This table is divided into functional areas' needs since that is the best way to allocate each team´s needs and resources (Galpin, 2018).

Facility-related costs are listed, including renovation, furniture, additional services installation like unique internet connectivity, personnel expenses, and legal and marketing. The idea is to demonstrate the investment needed to start the synergy with top management. They must decide if that investment is fair to achieve a future revenue synergy strategy.

Transition timeline

This task needs an owner included inside the core integration team. The recommended tool to use is Project MS, but similar also works. The idea is to put all the integration project plans into one document and only include vital milestones. The detailed elements of the program are owned and tracked by each representative of each integration area. The objective of this tool is to track and delegate on-time teams´ tasks to develop their activities on budget and schedule. Since it will just track milestones, the groups that follow it will have accountable results to look for in their internal outcomes. Each specific project inside the M&A will need to adapt all its schedules to this transition timeline. In addition, a document with instructions, owners and responsibilities should go together with the Project MS file. The recommended tool is Word, and it is a reinforcement tool to define inputs, teams and outputs for each task. This can be a list of the desired results or detailed reviews mentioning what the team expects to work on, with specific delivery dates and owners (Galpin, 2018).

Appendix B demonstrates a corporate example provided by Tim Galpin. This example is crucial to highlight that only five columns are included. First, the simple task name shows the main objective of that tracking element in simple words. The second and third columns show the tasks' initial and final dates. The main title dates for duties that can be included as subordinary tasks will consist of the first initial day of all functions and the last day of all the subordinate tasks. The third column, showing the percentage of completeness, will be filled once the integration execution begins and be regularly updated by the transition timeline owner. The fourth column graphically indicates the time relation between all tasks and their completion percentage. It is regularly tracked in monthly sections, showing a clear division between years (Galpin, 2018).

The author recommends dividing this documentation into the following milestones:

1. Prior *DayOne* submissions:
    a. Internal business process
    b. Define a universal reference list (like prices, suppliers, products, etc.)
    c. Managers' outputs for deliverables and expectations
    d. Local specifications for each location
    e. Locations impact and constrains
    f. Organisational changes approved with organigram and job descriptions
    g. Communicate all changes to main stakeholders

2. *DayOne* requirements:
    a. Compilation of product/service supply lists and files.
    b. Inventory and supply chain strategy
    c. Cost curves for all production/service locations
    d. Comparison of cost curves

3. Week one
    a. Results of initial M&A launching
    b. Distribute communication among stakeholders of initial results
    c. Review with managers and adapt integration plan as needed

4. Month one

   a. Prove functionality of integration-defined processes
   b. Corporate personnel adapted to the new HQ
   c. Start relocation plans according to CRE synergies
   d. Track clients and suppliers' adaption

5. Q1 review
   a. Lock all synergies and block goals
   b. Create synergy measurement and the way they will be reported
   c. Long-term database system
   d. Update the initial integration plan and its execution model
   e. Create a business map and adapt to global options

Issues and recommendations

This document is issued by the core integration team looking to attract the executives' and primary stakeholders' attention. It will prioritise the main issues that are not in control of all the tasks developed before, during and after the integration. The summary is shown as bullets where all the possible affectations are attached. Managers should not consider this file as a risk analysis. Instead, it prioritises potential challenges that the M & M&A may face outside the companies involved. It can work as a backstop for future barriers and obstacles that managers can use as future consultation. There is no need to stop any integration activity waiting or after the delivery of this document since it is just a holistic review of external factors that can move the direction of the M&A (Galpin, 2018).

In addition, the possible solutions can be included in this document. A person from the hired consultancy company is the ideal owner of this document since they will have experience dealing with M&As and have benchmarked solutions. Recommendations in this file will need to adapt to the M&As characteristics in the case they become real. Nevertheless, no prework actions from the integration team are recommended since the risks mentioned should be included in the initial preliminary review of the M&A. These risks should ve minor and no potential harm to the corporate new strategy (Galpin, 2018).

4.3 Team members

Once the initial integration milestones are proposed, the CRE must bring to reality all the arguments and strategies to show the numeric analysis. Here are the steps required to start the strategy definition:

1) Define a team to elaborate the synergies

Both companies have to define who are the people involved in the synergy definition. The team needs to have a detailed understanding of each site's role and regular communication with them. For this reason, the CRE team is the most indicated to collect the information and propose the synergies and define clear objectives. Once each company's team is determined, they have to get together and start collaborating as a team. They need to have open communication. However, remember they still work for competitive companies, and only specific data can be shared. An essential element of this initial phase is that all the members have a particular role, with clear outputs and deadlines and their regular job inside their original company. It is recommended to have regular calls, either weekly or bi-weekly, to see the status of the case definition and solve doubts and queries.

The ideal combination of members is to have each company's head manager who understands and knows the real estate business in a top management position. A corporate vice-president or higher is suggested. Also, a more decision-making member is involved in local decisions, like the portfolio or facility manager. They will give detailed information about the business and can provide detailed feedback on each business case. And last but not least, each company should involve a person that understands and tracks the portfolio numbers in detail. They can be either a person from finance, procurement or the CRE team. The idea is to have the most portfolio updated information every time the synergy strategy is analysed. Each integration planning facilities team member must be transparent that the companies are still competitors during the integration development and synergy creation. Legally approved information can be shared. Every time an additional element is needed to be added to the analysis, a request should be sent to the local/fusion legal team and the share date for the preliminary review.

2) Gather information from all the companies involved**.**

Information can start flowing once the teams are defined, tasks delivered, and they have the legal training and milestones in the schedule. Once the legal team has approved sharing all the information, one of the members should collect the data into one file and do the preliminary analysis. This person must dedicate at least 50% of their time to the collection, update and synergy definition. The information to be included in this collection document is:

1. Previous ownership (from which company it comes)
2. Site ID / Code / Internal reference
3. Ownership
4. Business unit
5. Complete address
6. Main usage
7. Square meters
8. Headcount
9. Lease expiry date
10. Annual rent payment *
11. Site contact person**

*In the case of the KC/CT fusion, this data was only approved to be shared with a rough estimation meaning that the amounts should be rounded to the nearest ten thousand. **Even when this is one of the most critical elements to be tracked, the fusion CT/KC didn´t happen since the merger was cancelled while developing the approval of sharing this information. However, synergy proposals were done by each member of the affiliated company and began the reviews with the local teams.

The best method to collect the information is by a cloud platform where all the team members can have access to the most updated version. At the same time, all can make changes and keep the file as one version throughout the process. Nevertheless, each company should use the tools assigned to develop the integration.

4.4 Approval process

Once the integration CRE team collects and analyses the data, the local business must review and approve all the synergies. But to say that is to mention the first step and jump directly to the last one. First, the CRE member that analyzes the data will review the synergies with the rest of the integration team. This initial data only will include the numerical analysis without risk factors or any other additional element than distance, use, square meters and headcounts. This analysis is just a “desktop strategy definition.” It may take additional days, but the complete CRE integration team will review it together. As mentioned in the previous chapter, the CRE team from both companies have further details. They might know specific details of characteristics that may affect the result of the synergy strategy. This first review aims to include the risk factor and eliminate or look for other solutions to the synergies that will not be possible due to location-specific details.

In the CT/KC fusion, collecting the data, updating it, and defining the initial synergy cases lasted six months. The primary constraint was the legal reviews since all the information shared between the integration CRE team needed to be reviewed by the legal integration team. It took around a week per review. Once the initial data was collected, the first analysis took four months. After the numerical analysis was done, the studies lasted an additional week. This review is where the most drastic changes in the strategy will occur. The total amount of colocations was reduced by around 20%, and the total savings decreased by 35%. After the CRE integration team has the strategies clear in mind, they will need to start approaching regional / country managers to propose the synergies. The idea is to have a short call with the primary stakeholder of the business per region and show the business cases. The risk factor concluded during the initial review will be consistent in the local manager's assessment since they know the details around each location. The idea is to demonstrate the possible savings most straightforwardly and give rough numbers to show the needed investment to achieve the short-term savings related to leasing rent. The savings related to the synergies will be included in their yearly/quarterly scorecard. The success of all the synergies will now depend on the integration team and the local/regional manager.

4.5 Data collection

Once the targets and goals are defined, the participating CRE teams need to start the engines, assign resources, and determine an internal plan to identify the strategies. As mentioned in the previous chapters, the integration plan will track the progress of each team with preliminary submissions before *DayOne*. The internal CRE plan will need to include these initial submissions as milestones. Each submission must show the progress of materialising the suggested savings by the consultancy's preliminary reports. The initial step to start the materialisation was that all the members needed to have legal training before being involved in the integration team. Both companies were dedicated to the cargo handling industry and were direct competitors. So the integration team will only have access to general information, not showing the internal business that may affect the actual status of both market development.

Once the legal limitations are fixed, the plan can start. Both teams can get together to begin the analysis of existing portfolios, integration strategy, responsibilities, and aspects that will involve the materialisation of the synergy proposal. Milestone one is to put together the companies' real estate portfolios. This task is quite simple if the companies have a CRE centralised where internal portfolio management is done. Nevertheless, having this corporate model is not always the case. For the CT/KC fusion, one of the companies had a decentralised CRE model, so this initial step was not as simple as for the other company. The procurement team was in charge of tracking the leases, and the only tool used for recording the owned sites was an excel file. So, how to manage this integration?

The integration team needed to go with the local business to ask for the required data for the synergy definition. This time dedicated to collecting the information was included in the milestone trackers and schedules, highlighting it as a risk since the real estate portfolio is a living entity. Integration planning may take up to three years. Even if six months go by, the real estate portfolio might not be updated since lease agreements expire and new sites are added. The business will continue its daily activities.

For this reason, a continuous update for the combined portfolio document was needed. However, it was not daily, weekly or even monthly. In the CT/KC fusion, an initial information gathering was done. Only two portfolio updates were done during the complete integration execution, one in the middle and a second on *DayOne*. The reason is that the strategy definition needed a detailed analysis of each site's information and a holistic review per country to understand the potential synergies. These tasks take several days of analysis and represent significant expenses for both companies since internal resources are dedicating their time to elaborate on the materialisation of synergies. The information collection began by putting together the following characteristics of all the sites for each company:

1. Site ID or Internal name
2. Ownership
3. Address & Zipcode
4. City
5. Country
6. Region
7. Main use / type
8. Square meters
9. Headcount
10. Lease terms
11. Annual rent
12. Main site contact

This information collection can be taken either from the primary master data of the CRE portfolio or if no CRE team is in the company. Send an excel table including each element as a column. Like that, each site member can include all the data. If possible, managers need to have the file in a drive so e-mail communication is avoided and all the site contacts can populate the file as one document. There is no defined solution for data collection. Each company should determine the best strategy that adapts to the tools inside the corporation. Nevertheless, it should be efficient, and times must be according to the main integration schedule.

Ownership

A site can use a building in two ways: leasing the space or owning it. Companies prefer to rent than own for several reasons, even if both options have pros and cons. Leasing is more common if the company is growing fast and managers are not sure how the mid-log term future of the company may look. Suppose the market status around the company's core business is uncertain. Leases for 4-5 years allow the enterprise to try new locations, test the market, and if the revenue is not good enough, they can change location. In addition, if the company is low in capital and its financials are not good enough for a down payment, leasing is better than getting a loan (Behar, 2022).

Nevertheless, companies also have good reasons to buy properties or lands. In cases where the business is growing significantly and enormous investments are about to happen, buying an asset can be the best option. Like that, the company can have complete control over the property, avoiding negotiations with the landlord. In sites where production will happen, installing specialised equipment and modifying the existing structures will be easier on owned assets. Additional configurations like leasing the land and owning the building or the other way around can work. The author of the Forbes article titled "Is It Better To Lease Or Own Commercial Property?" Anthony Behar suggests that the CRE team needs market research to understand the business needs and financial status. In addition, the finance team should run future cashflows to understand the risks and make the best decision with grounded fundaments (Behar, 2022).

Why is it important to track if the site/land is leased or owned? Since the rent payment can be stopped when the lease agreement ends, synergies with leased assets have lower risk and faster-saving reports. Owned buildings can be included in synergies but some instances. If the owned site needs to be closed, savings will not be reported directly as a CRE benefit. The financial integration team will need to track this as an additional income, but the risk is high. Extra time will be required since the site needs to be launched to the market, long and intense negotiations with the new owner and the preparation of all the documentation to change the ownership. Companies are not interested in owning assets, so that the sale will take more time and effort.

Types

The activities done inside the premises will determine the type of space. Starting with the first industrial revolution, companies began to define their real estate portfolios since they needed to track where the main activities of their business were happening (Schwab, 2015). Depending on the company´s focus is the classification it will receive. However, it was not always like that. When the first companies appeared worldwide during the first industrial revolution, all the positions worked together from the same place. We can say that that was when CRE’s efficiency was at its highest. Have as many workers as possible, producing as fast as possible in the tiniest possible place. Nevertheless, laws and restrictions appeared, and the number of square meters per company needed to increase if they wanted to expand the business (Borland, 2022).

As time went by, the second (1870) and third (1969) revolutions introduced the division of white and blue collars. With electricity and the internet, managers needed a quiet corporate place to develop their tasks and increase the company’s value. Offices and production sites were divided. Companies were expanding the number of square meters the company owned/leased once again. In addition, as M&As put together companies’ portfolios more commonly after the ’70s, adding more assets to the combined company affects the efficiency, meaning the increase of square meters per employee. Today, the fourth industrial revolution integrates cyber-physical systems and cloud integrations with the internet of things. But what are the effects on the real estate portfolio of a company? First of all the reduction in production square meters since fewer employees are needed to have the same output: more occasional circulation areas and smaller assembly lines with compact equipment. The home office structure can be done without affecting the business of offices. This aspect had a strong push due to the covid-19 pandemic that we will discuss in further chapters. For warehouses and service units, communication and interconnectivity will increase. Less inside-cities space will be needed since combined shipping can be done by increasing the contact with several business units (Tully, 2021). These are just some examples. In detail, let's review the types of spaces a company can use and the possible combinations a synergy can propose.

Offices

According to the Cambridge dictionary, this space is a room or a building where a firm's business is done. They are generally located in urban areas where business people that can be clients or external stakeholders for the company can easily visit. The main activities inside these buildings are white-collar (computer tasks), meetings and collaborations with other white collars. Having an office inside a company is a physical space where employees have an environment focused on working and helps them get their job done. The reasons for a company to have a physical office are several, including team collaboration, encouragement of company vision, better and faster communication and competitive advantage (Todd, 2022).

Nowadays, the market offers several kinds of offices (Todd, 2022):

2) **Corporate offices:** is where top managers are located, also known as headquarters. Their focus is to define the company's core elements and internal strategies. They have separate cubicles and significant meeting rooms where all stakeholders can determine the company's future.

3) **Serviced offices:** spaces completely equipped for smaller business units than the corporate team. The entire site is owned/leased by a third party, and the expense of the users depends on the employees and the time they use the premises.

4) **Coworking offices:** temporary spaces rented per hour or per day per employee. They are used by companies with employees who travel or change location more than once per month, but they still need a place to work in a good environment and have meetings with clients and other team members.

5) **Home offices:** several corporate positions can adopt this strategy since the expenses are significantly less. Generally used when the incorporation of the company is new in a country and the ongoing process of having an office. The enterprise sometimes assumes the cost of ergonomic furniture and appliances for the home elements to make the space suitable for white-collar work, especially for sitting for more than 5 hours in a row.

Figure 5 shows the possible combinations an office synergy can have. The risk is low in every potential synergy where various offices are suggested. It is relatively easy to adopt a new office with more people to develop the same tasks they were doing in the past. Nevertheless, the combination with other elements will need further local business analysis. In addition, a detailed financial run will be required since significant investment will be required. The secret to having successful office synergies is to locate unproductive spaces where the environment is similar to or better than the previous office, and the users are willing to adapt to the change.

Office	Receive	Moved
Office	✓	✓
Production	✗	!
Workshop	✗	!
Service Unit	✗	✗
Warehouse	!	!
Retail	✗	✗
Mix	!	!

Figure 5 Office possible synergies, by author

Production

Also called a factory, according to the Cambridge dictionary, is where manufactured elements, articles or products are made in large numbers. This space is generally owned since the equipment inside needs to adapt the facilities to all the inside equipment. In some cases, costly equipment is designed especially for the location, and changing the location or modifying the facilities will significantly impact the location expenses. Nevertheless, bringing other uses to the production spaces will need a deep analysis since production factors, like noise or smells, can affect the inside activities. *Figure 6* shows that the factories can not be received by any other location, except possibly another production site or workshop where very similar production occurs.

Nevertheless, engineering teams need to analyse this suggestion since the production of slightly different elements can modify the supply chain. In the CT/KC synergy definition, combining production sites with other features was an automatic no-go. However, we included the suggestion and marked the risk as very high since all the potential should be tracked, and the business was the one making the final decisions.

Production	Receive	Moved
Office	!	✗
Production	!	!
Workshop	!	!
Service Unit	!	✗
Warehouse	!	✗
Retail	✗	✗
Mix	!	!

Figure 6 Production possible synergies, by author

Workshop

The dictionary defines it as a room or building that can be inside a factory where repairs and specialized construction happen. We can classify them as miniature factories, but less equipment is needed. The requirements for facilities to include this use inside are less strict than in factories. However, noise and waste factors should be crucial when deciding the location of these sites. With this space, we have the requirements to focus on the product created by the company. In the case of the CT/KC fusion case, these spaces were considered significantly prominent properties since the creation of both companies' businesses were cranes. Circulation for cranes needs room and a place to park and save spare parts.

For example, in other workshop analyses, the space would be smaller for companies producing bikes. A synergy proposal would be more accessible, and even new locations can prioritize location instead of size. Figure 7 shows that the synergy proposal will be easier than the factory one. Nevertheless, each case will need a further examination by local businesses since each workshop needs particular elements in their facilities to allocate the services they offer inside.

Workshop	Receive	Moved
Office	!	✕
Production	!	!
Workshop	!	!
Service Unit	!	!
Warehouse	!	!
Retail	✕	✕
Mix	!	!

Figure 7 Workshop possible synergies, by author

Service Units

These are relatively small sites where clients take the products for someone to examine, adjust and clean them so the product keeps working as efficiently and safely as new. The main difference between a workshop and a service unit is that essential services are offered in the service unit. No extensive equipment is inside these locations, at most a lift to examine the product in all its faces. The main objective of these places is to solve easy issues with the product and, if it is not possible, give an assessment and assign the client to the required workshop.

Another characteristic of this location is that it has to be where clients can easily and fast arrive at it. In the case of CT/KC, crane owners usually do not live in urban areas. Service units were located in small towns or outside big cities, meaning the expense for the rent was not significant. Nevertheless, the portfolio consisted mainly of these elements since they represented the highest quantity. While developing the synergy strategy, the focus of this kind of site was left as a "lifesaver" since they were no low-hanging fruits that would give the M&A a significant impact at the beginning of the integration. Still, they represented considerable savings that several resources will need to develop each business case. Since the M&A results included a timelapse of three years, the idea was to attack as much as these synergies depending on the lease expiry date and not force any early termination.

Service Unit	Receive	Moved
Office	!	✗
Production	✗	✓
Workshop	!	✓
Service Unit	✓	✓
Warehouse	!	!
Retail	✗	✗
Mix	!	!

Figure 8 Service Unit possible synergies, by aithor

Figure 8 shows that service units can rarely receive any other type of location since the facilities inside of it are pretty limited. Nevertheless, the service unit can be relocated to any different location if the business can handle it, except for the offices and retail locations. Since these properties need fundamental elements for delivering the services, production, workshops, and other similar service units can accept an additional service location.

Warehouses

The Cambridge dictionary defines these locations as buildings or places where goods can be stored. In some cases, they can work as a distribution centre since all production can send the products and put them together with other elements to send shipping according to the client´s request. However, a distribution centre is just one kind of warehouse. The main difference is that the products are not stored for a long time in a distribution centre. The second kind is the pick, pack and ship warehouses. When the final product is in the warehouse, a client´s order needs to come for the product to be moved again. The third type is the intelligent warehouse, where few or no people are involved in the product handling process—the precision and efficiency increase and the initial investment. The last kind is the specialized warehouse, where special requirements are to keep the product as much time as possible with the required quality standards. Some conditions include cold storage or humidity control (Jarrett , 2022).

As factories, workshops and service units, warehouses are positioned outside the cities, where tremendous plots can be used, and trailers can be loaded. Facilities need to have enough space to keep as much product as the business need and offer hauliers sufficient space to manoeuvre their load. The efficiency of the space can be easily increased by elevating the ceilings and adding more racks. While developing the syn-

Figure 9 Warehouse possible synergies, by author

ergy strategy, these solutions make a low-risk synergy to combine two warehouses. Nevertheless, the other combinations are possible, but the warehouse-size would be crucial, especially in the CT/KC fusion, since the stored products are cranes and heavy lift trucks. The low-hanging fruits were warehoused where spare parts and service items were stored.

Retail

A retail location is where a company sell, generally in small quantities, its products or services to a person or company who will be the final user (Cambridge, 2022). These retail locations can be either inside a mall or an individual site. Depending on the country and the item sold is the location and whether it is inside or outside. The exhibition area needs good illumination and wide doors for the products to enter. Generally, they contain a small warehouse to save the most sold products and have local stock. Their focus is generally on the concept of the brand, adapting functionality and guest experience. Colouring and lighting design are these locations' direct investments (Palmer, 2019).

These locations were not considered for the CT/KC fusion since the way the product is sold does not need retail. Nevertheless, it will be included since applying the synergy strategy defined in this thesis needs to use retail analysis. The most common model

Retail	Receive	Moved
Office	✓	!
Production	✗	!
Workshop	✗	!
Service Unit	!	!
Warehouse	!	!
Retail	✓	✓
Mix	!	!

Figure 10 Retail possible synergies, by author

business is to have a headquarters, where all the business decisions are made, production sector where the core business produces the items. The warehouse is the next step since the product is sold, and the final stage is the retail location since the product is assigned to its final user. While the client uses the product, it can be taken to a service unit or workshop to extend its lifetime. The client can also use these two locations to dispose of the product or request a new one (Palmer, 2019).

Figure 10 shows how retail locations are pretty flexible and can be combined with any other use if we consider only real estate factors. However, while analysing one of the essential retail factors, location, the synergy might represent a risky move. For a purchase to happen, people need to see the store and the exhibition, if we move the site to an industrial location, much fewer people will pass by, and the synergy will not bring as much revenue as having it by itself.

Mix

Nowadays, most companies´ locations have several uses. Since the spaces need to use their maximal potential, companies will put as much as personnel and activities for each area. For example, having office space for all other uses is pretty ordinary. All the locations need at least one desk to track the inside activities. This means that some offices will be assigned to the production, warehouse, workshop, and service units. However, for practical and administrative reasons, the site use will be what covers the most significant percentage of the site. While developing the synergy proposal, CRE managers need to analyse all the locations critically to assign them the primary use. The lease agreement will sometimes define it since the land usage is very limited. Commercial, retail and offices are the cases. So the CRE managers will take the use directly from the document. For warehouses and production, the type of facility will give a general idea of the primary usage. However, once the location distribution is defined, the use should be communicated to the CRE team, so the portfolio has the complete information. Nevertheless, during the CT/KC, we had several cases where the data from each site was unavailable, and we had to classify it as a mix. We needed to increase the risk of the synergy proposed due to uncertainty and missing information.

Mix	Receive	Moved
Office	✓	✗
Production	!	!
Workshop	!	!
Service Unit	!	!
Warehouse	!	!
Retail	✓	✗
Mix	✓	✓

Figure 11 Mix possible synergies, by author

Figure 11 shows that two mixed sites can be easily placed together since they have several uses inside. Also, the combination of a mixed location with warehouses, service units, workshops or production can be proposed. However, local business needs to give their input to understand the objective factors behind the mixed cataloguing.

Additional information

Extra information from each site will be needed. This section will explain why this information is essential and where CRE managers should get it. Based on personal experience and CRE type, these suggestions can be applied.

a) **Address & Zip code / City / Country / Region:** this information is taken either from the lease agreement or ownership statement. It is the most important data since the synergy strategy prioritises geolocations. Further chapters will explain in detail how this analysis will be done. In addition to the real estate synergy definition, HR, IT, and other areas need to track the official and reallocation to deliver any item (like computers, documentation or any official and original paper). Street names, internal and external numbers, and additional details like street references are ideal for the database.

b) **Square meters:** also will be taken from the lease agreement or ownership statement. There is always the big question of the ideal square meters to track. Are they the useful ones or the built ones? CRE can consider the official ones for practical reasons, followed by the documents. The size of the location will be pretty significant, entirely developing the synergy since the probability and risk of allocation and closure of a site will depend on this factor.

c) **Headcount:** with this information, we might require the help of the human resources team. Especially for offices, the number of people inside will be the second factor to analyse while determining the synergy. The needed number is the total of physically allocated people to that site, meaning they go to that location every day to develop their tasks.

d) **Lease terms / annual rent:** to plan early in advance, the synergy, lease terms and yearly rent need to be tracked. These are only for leased assets; the details are included in the lease agreement. The CRE integration team needs to follow the lease terms to understand when the synergies can start and when they need to start the conversations with the sites to know the synergy viability. The annual rent needs to be collected since that is how the savings will be reported. In further sections, a detailed explanation of these reports will be explained.

e) **Main site contact:** this is the secret factor to achieving successful synergies. Local personnel are not generally interested in corporate targets. They have their daily tasks and do not report directly to anyone in the CRE team. The local contact point needs to have all the information related to the asset and can collect it if it is not in their hands. The conversations to achieve the synergies will go directly with them, and approval flow with the end in their hands. They need to have a complete understanding of local needs and have in mind that adaption of the business is needed to achieve the corporate results. Efficiency and teamwork are needed from this person, which is the same for several sites in the same country or region most of the time.

4.6 Covid – 19 adaptions

The covid-19 pandemic gave a 180° twist to how we see the offices. Laws and shutdowns obliged the world to close their offices until nobody knew when having to adapt to an entirely “New Way of Working” (Kupiec, 2021). CBRE, one of the market's most influential American commercial real estate services and investment firms, has assigned a complete research team to develop and investigate the new way of working. After this pandemic, Andrew Kupiec, CEO of CBRE, says the real estate market will look different. Companies that do not adapt will lower their revenue since all assets inside a business represent a significant investment or expense.

Remote work started to appear in the market since the internet was available to incorporate computers. Nevertheless, companies were afraid to encourage remote or hybrid working since they believed employee development would be affected. When the Covid-19 pandemic came, employers were forced to accept remote home office policies. Otherwise, white-collar activities had to be stopped completely. Production and unique workshops and warehouse locations had the governmental permits to continue their everyday tasks.

Nevertheless, offices needed to be shut down. Younger than 30 employees noticed working from home happily, but older generations focused their effort on adapting. Even if several articles were launched by The Harvard Business Review and Bill Gates had mentioned in his interviews, the office was a workplace for some white collars. No other place was assigned to that task since face-to-face collaboration is essential to keep the company on track. Two years passed, and enterprises adapted faster than managers believed. The company´s efficiency and business progress were not affected. According to another CBRE article, *How Hybrid Work Will Transform Our Workplaces,* published at the end of 2021, companies need to focus on three areas to achieve the adaption to this “New Way of Working”:

a) **Talent attraction and retention:** More than 1,000 people from companies in all sectors have been included, and 56% expect their business unit to keep the hybrid way of working. Since workers now wish for flexibility and results show that the business is not affected by secondary outcomes resulting from a mixed form of working, employees look forward to companies adapting to the new way of working. The first risk we can observe if companies do not adapt is that they will have a severe talent drain. But many consequences can be listed for not adapting (Kupiec, 2021).

b) **Space utilization**: The office will not be a five days per week, nine to five. The focus will be completely different since the need for a place to collaborate has increased, and areas where people need to concentrate and focus, will be moved to each employee's house. Some corporate positions can adopt the model of three days in the office – two days at home. If employees use the time they spend at home to develop the tasks they have to do by themselves and use the office only as a place for collaboration and team development, the spaces must adapt accordingly. CBRE researchers suggest reducing the area for their work and increasing the meetings and team collaboration rooms (Kupiec, 2021). But how to reach de ideal / most efficient amount of space an office will need? That is one of the synergies this analysis will use. The idea is to encourage adopting the new way of working while developing the M&A synergies. There are several cases where small offices are acquired. However, so few people in that location/country will work in a hybrid or a completely remote way that having an office just for them does not make sense. Options like serviced or WeWork spaces can be taken into account. The following section will explain more details about how to achieve this synergy.

Nevertheless, the most common case will be with significant offices, like the headquarters, with more than one hundred employees and cannot be completely shut down. For these cases, the shared space strategy should be implemented. This tendency was introduced to the market in the early 1990s, but companies still struggle to understand its concept and benefits. Once the desk-shared strategy is implemented on-site, space efficiency can be increased, and a new method applied. Owned spaces, where each person has their desk, and nobody else can use it, is already in the past. Online clouds and laptops enable the possibility to work from every desk without needing a personal storage area. This strategy encourages space efficiency and neatness in office space. To ensure that there will be enough space for all the employees daily, the facility team can use a booking tool (like an app or a program). In addition to the shared desk strategy, meeting rooms also will need to adapt to hybrid working. The idea is to have all the necessary tools and enough space for the team to fit inside the meeting rooms. Good quality speakers and microphones, 360° cameras and screens with friendly computer adaptors are recommended to encourage communication with all team members regarding the location. Once this strategy is implemented, employees will efficiently use the office, and some space can be reduced in all offices (Beaudoin, 2021).

c) **Workplace design**: this factor is straightforward. Keep the office a beautiful place. Since employees will go to the office because “they want to”, a place where people enjoy their stay should invite them. The idea of tremendous white boxes illuminated with intense light, rectangular grey or white desks in infinite rows, is no longer the ideal fix for an office. Once again, CBRE research has demonstrated that spaces with good interior design can encourage people to go happily to the office and develop their tasks efficiently and in a better mood. Integrating the correct pallet of colours with dynamic and ergonomic furniture and the proper amount of design elements like frames or art elements can give the office an identity that will help employees go to the office more reliable. In addition, this New Way of Working encourages spaces for collaboration, meaning that several open spaces can be included. In these open spaces, employees can have easier brainstorming or plan the next steps for projects more interactively. Digital and physical whiteboards, tables for several fixes, projectors, excellent internet connectivity and even enablers for hybrid meetings are wonderful elements to include in interactive and dynamic open rooms (Beaudoin, 2021).

4.7 Synergies

Real estate experts have been using the word synergies since early 2000. Real estate research increased its popularity, where 980,000 hits resulted in google and Bing's 1,130,000. In this article, the term was used merely for marketing purposes. Since then, real estate experts have debated if and how this strategy creates value in the real estate sector cause literature and written case studies suggest limited proven application success. Twenty years have passed, and the secret was revealed: see synergies as an opportunity to adapt to globalization and technological progress by thinking about the linking possibilities with other assets. The real estate world is affected by external factors more than any other business. Therefore planning synergies is one task, but bringing them to reality is more critical (Ordway & Friedman, 2015).

Synergy comes from the Greek root *synergia*, which means working together or cooperation. The real estate application of the synergy word can be used as a gathering of uses to potentiate the use of an asset, like having a mixed-use plot for people to use it dung the day as an office and at night as a residential. For what refers to the subject matter of this thesis, a synergy is a process of subtracting, adding or recombining any external or internal element associated with the asset that will increase the value of the real estate element at some point in time. This definition integrates financial, appraisal and best use of any facility, very similar to the main objective of an M&A (Ordway & Friedman, 2015). So, how do you include real estate synergies into an M & M&A? When two companies are merged, people develop certain duplicated positions. While eliminating this duplication, space will be left empty, and previous vacant spaces now will be occupied by new people or personnel from the other company. Some areas need to increase their size, and others might be reduced or eliminated. In addition, an M&A is the best opportunity to include a new way of working strategies in the analysis. The following synergy options include all the applicable possibilities that synergies can result. The idea is that by analyzing the information described in the past chapter and define a plan to achieve the needed or required savings. The initial investment will be required. However, that analysis needs to be done once the synergies are prioritized according to their benefits.

Colocations

In simple words, it is to put two sites together. The first step is to analyze the distance between two or more areas. According to the driving distance, meaning how long it will take for a person to go from one location to another by car, these colocations can be suggested. Today´s technology allows us to simulate this route. Tools like Waze or Google maps can easily estimate the driving time for tow points. The last chapter will explain how to reach this analysis using one of the tools. During the CT/KC fusion, one hour's driving time was defined. Several studies by the CBRE “New Way of Working” team have demonstrated that the longest time a person will be open to driving from their house to their daily work is one hour, and the simple average is half an hour (Beaudoin, 2021).

Figure 12 Distance analysis of two sites, by author

Following this principle, *Figure 12* shows an example of two sites with a driving distance of one hour. The average time of the people working is assumed to be half an hour. This fact was not analysed; nevertheless, it was always considered. Suppose that Site B has more square meters and more employees than Site A. For this reason, the colocation will be to close Site A and take all the activities and employees to Site B. If site B does not have enough space to allocate Site A, a possible extension can be pursued and still achieve savings. For the initial proposal of the case business, only the use, square meters and the number of people allocated will be analysed.

Remote working

As mentioned in chapter 4.6, integration of covid-19 adaptions, hybrid working is here to stay. However, remote working can be considered for additional savings in some cases. Globalized companies offer several benefits that can help the employees develop their tasks remotely, like laptops, worldwide insurance, and positions that do not require a physical office. For this reason, during the CT/KC fusion, adding remote work to the possible synergies was established. According to Gartner´s survey results, 74% out of 317 enterprises will change the status of an office-based position to a completely remote approach (Cserháti, 2020).

Two investigations agreed that the change of millions of employees would be shifted toward teleworking should be considered an expected step (International Labour Organization 2020 & UN research 2020). These studies mentioned that several global companies have been trying to include remote working policies into their standards. Nevertheless, managers were worried about productivity and how employees will react, especially the veterans. However, this pandemic removed all the fears heavily. Now companies have seen that remote work even increases productivity. Besides the size reduction of offices previously discussed, remote work for the entire office can also be included in the plan since there is no additional benefit for a company to lease/buy a particular space for a reduced number of people. Serviced or coworking offices can be the option for team collaboration, offering a significant cost reduction in real estate expenses (Cserháti, 2020). For the CT/KC fusion, it was determined that additional analysis should be done if an asset is only used for office and colocation was not possible. If the locations have fifteen or fewer employees, remote work for employees should be proposed. By closing the existing office, people can be virtually allocated to a more-than-hour driving distance site but work only remotely. If team gathering or teamwork sessions are required, a serviced office can be rented, or coworking spaces like WeWork can be a good option. This remote office option allows the team to choose whatever fits all the members best, so they feel they are working in a company adapted to the competitive market. By offering flexibility and a good and updated workspace, employees will have the freedom to choose where they can develop their everyday tasks and also have a place to meet their team.

Space efficiency

This aspect has always been an important KPI for the real estate world. According to JLL, the average occupancy percentage for traditional office buildings in the last ten years has been 60% of expected occupancy. Meaning that for every hundred square meters a company leases / owns, expecting all of them will be occupied, only sixty are. The ratio that can be made is 60 out of 100, meaning every employee uses an average of 16 square meters. Implementing the shared radio can significantly decrease that efficiency (JLL Research Team, 2020). By eliminating personal space for saving documents and office products, reducing the desks' size, and implementing hybrid working, fewer working spaces will be needed at the office. The standards used in the corporate strategy before the CT/KC strategy define that each employee should have at most twelve square meters (including services and amenities). The 12sqm/hc efficiency strategy was on track when the merger was announced. CRE members have a KPI to achieve for a certain period that number. Nevertheless, the merger happens, and more square meters will be added to the portfolio.

In addition, the covid-19 pandemic pushed more employees into hybrid working, reducing the number of square meters per personnel. After returning to the offices, the daily office occupation was 40% of the maximum capacity when corporate members observed that the efficiency target had been reduced to 10sqm/hc (JLL Research Team, 2020). When we translate this target into an M&A synergy, we must focus first on the use (since this metric is only valid for office buildings) and the existing efficiency. Space efficiency needs to be improved when the past two synergies can not be applied since there are no close sites or the office has more than fifteen employees. The best way to reduce the space is by understanding that the office will no longer be used for individual work, and the focus will be on collaborating and having team meetings. That means the total population will be reduced daily to reduce personal working spaces. However, meeting and collaboration spaces will need to increase their size and the number of square meters. Figure 13 demonstrates how the collaboration–self–working space should modify to reach the desired reduction. On average, 30% of the total office space can be eliminated if the office can adapt to the new policies of hybrid working.

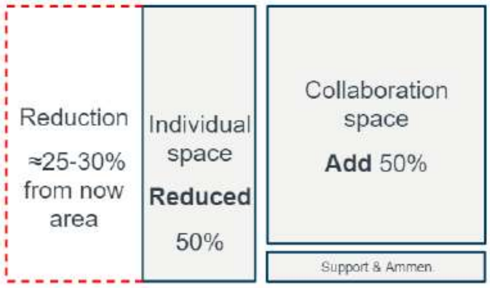


Figure 14 Space Efficiency reduction

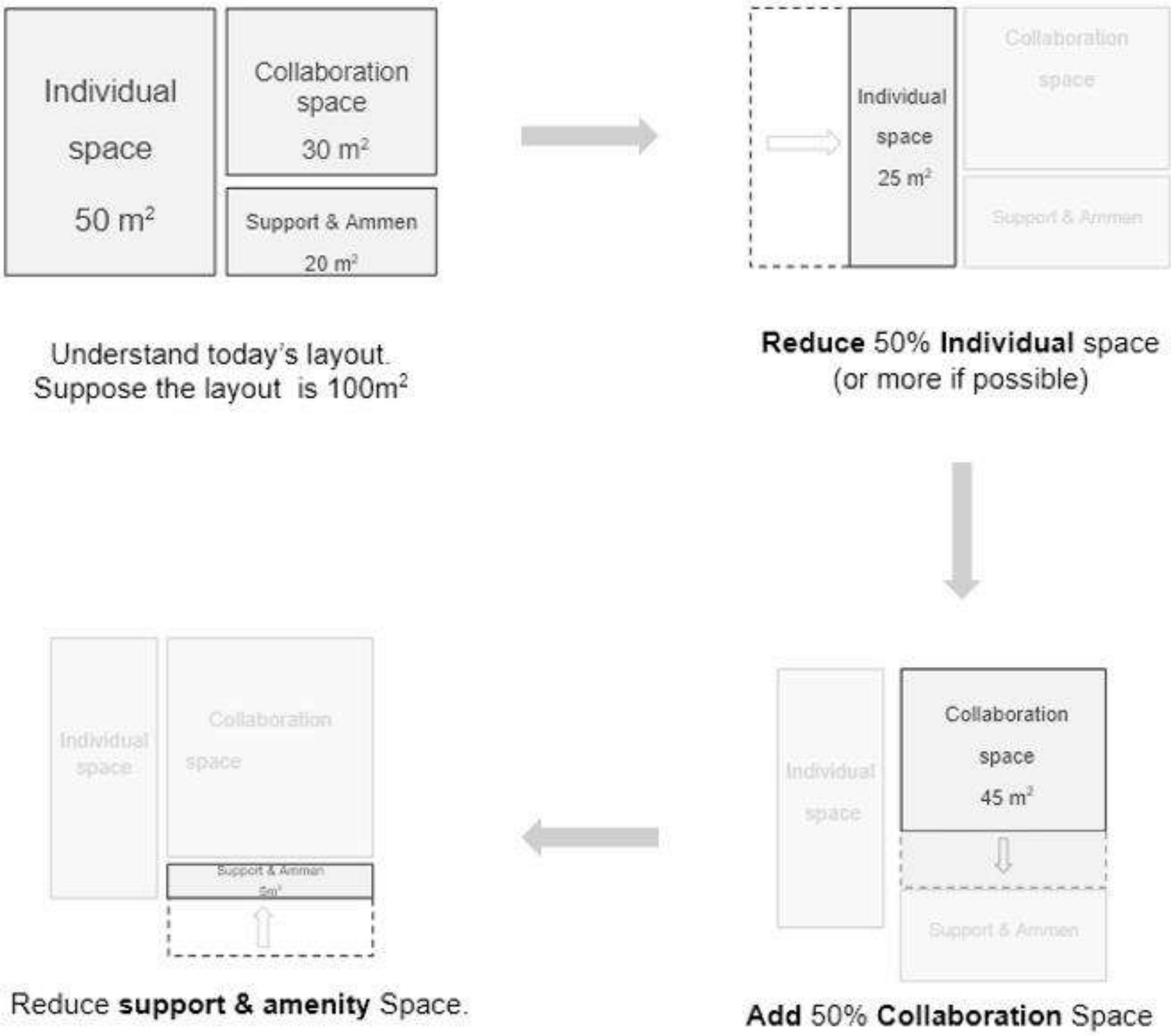


Figure 13 Process to achieve space efficiency, by author

Benchmarking

According to the Cambridge dictionary, a benchmark measures the quality or quantity of something and compares it to an external average with the accepted standard. When this topic is applied to the real estate world, it is a financial measure that resembles what is paid with what the market offers. This synergy option only applies to leased assets since it is the way a company can look for savings either by negotiation with the landlord or simply relocating the acquisition. Nowadays, a critical element while benchmarking is data collection, analysis, and result definition from the collected data. CRE is crucial in this task since a holistic array of data will be needed to understand the existing numbers adapt them to the local KPIs and translate them into achievable targets (RefineRE, 2021).

There are two ways to achieve successful benchmarking:

1) **Negotiate with landlord according to market price**

This strategy will happen when the new contract agreement's terms are sought. Once a fixed-term agreement ends, the lessor needs to research the market and understand if the existing location will value what the landlord argues. Generally, CRE is not an expert in the local market, so they will require the help of external real estate companies, like CBRE or JLL. The tasks of the CRE team are to do a business case and analyse the cost of having the real estate expert consult and the future savings they are looking forward. Also, a consultancy team can be used to negotiate with the landlord and achieve a better contract according to the existing local market.

2) **Relocation**

If the negotiations with the landlord are unsuccessful, the next option is to try to relocate. Since market research is already done, several options can be inside the CRE mind. Creating a business case to understand the needed investment and the time to have the return of an investment will be required. However, the investment required here is adapting the new space and leaving the existing area as the landlord needs.

No changes

This synergy action will be the last option the CRE team would like to propose since it is the lack of synergy opportunities on a site. Most cases are the owned site where production or workshops are allocated. This will never be an option if the site is an office since it first needs to be evaluated for a colocation. A remote work / serviced office will be on the map if it is impossible. The efficiency strategy will be tracked if more than 15 employees are in the office. The last option will be benchmarking if the efficiency is already good enough.

When we talk about warehouses or service units, collocation is the first option, then efficiency (however, the efficiency track will depend on the business focus and needs). The last chance can be benchmarking or relocating. Since the needs of a service unit or for a warehouse are pretty much generic across the market, relocation or renegotiations have a considerable probability of success. Nevertheless, the no-change option will be a possibility since the business case analysis can demonstrate that the needed investment to relocate is higher than what the revenue can be in the expected return time.

Production and workshop sites are generally owned and have specific characteristics focused on each business need. Collocation for these sites is pretty much impossible. However, the proposal should be analysed in each case. Remote working has been a no go since the beginning, and space efficiency can be a proposal; nevertheless, the risk is significantly high for the synergy to be unrealistic—a significant chance for the benchmarking business case to be rejected. The market on this site is pretty much reduced. Lease agreements for this kind of contract are generally long-term (starting from 10 years), and when they are renovated, real estate experts are involved since deep analysis needs to be understood to create a long-term lease agreement. For these reasons, the no-change option in factories and workshops can be acceptable. Further savings can be achieved by following the business needs and understanding the site details.

5. M&A CRE strategy for global companies. Testing CT/KC merger fusion strategy

Once the theory has been completed, the following chapters will demonstrate how the expected savings for the CT/KC were planned and achieved the target requested by the third party. After understanding the role of the CRE team, what an M&A and their combination, the integration stage is critical to reaching the success of the suggested merger. By combining the CRE team's knowledge and the fusion's targets and milestones, the integration CRE team will need to create business cases that will follow the approval process previously described. Each business case will be a plan that includes the arguments for the site to be modified, the proposed solution and the possible initial investment to have mid to long-term savings.

The business cases will require time, resources and budget from the CRE integration team and the local management team. These savings will be tracked on the core management and local scorecard. In addition, to achieve successful strategies, prioritization is the key. The synergies will be categorized according to their initial probability, the risk they represent to the business, proposed timing, and needed resources. Figure 15 shows all the steps required to create the business cases starting in the early stages of the integration planning until the reports show savings. The idea is to track the savings coming from the lease agreements that not will be paid anymore. This saving report will be explained more in detail in chapter 5.3. However, the general idea is to report the sum of one year of rental payments. The CRE needs to find the correct way to track these savings reports since not all the lease agreements will have the same tracking strategies, especially those involving owned buildings.

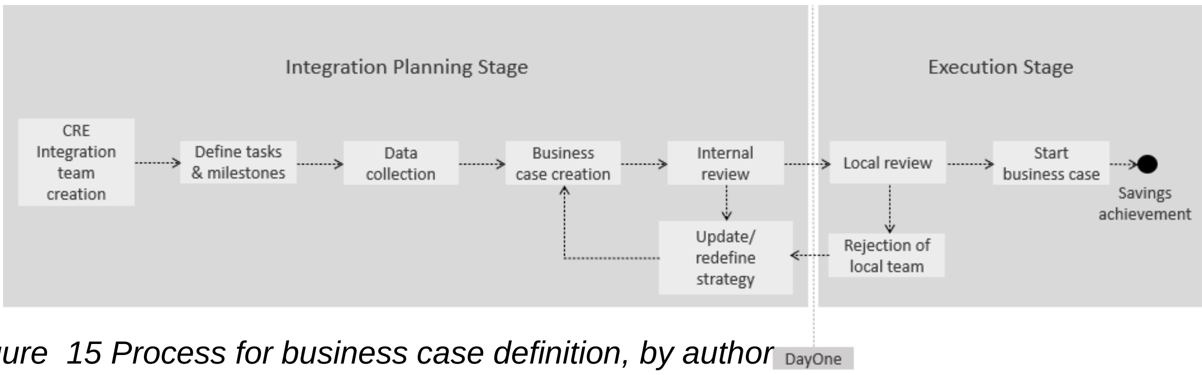


Figure 15 Process for business case definition, by author

Having the complete portfolio together gives a synergy plan to all the sites. Figure 16 describes how all the sites will be translated into synergies. These synergies then will be converted into business cases to achieve the desired savings. Initial preparation of the data needs to be done before defining the synergies. As observed on the left side of Figure 16, the location and distance between the sites are crucial to determining the strategy for each site. Once all the gaps and global localization of all the locales are completed, the synergies can be defined. The basic concept of this definition is shown on the right side of Figure 16.

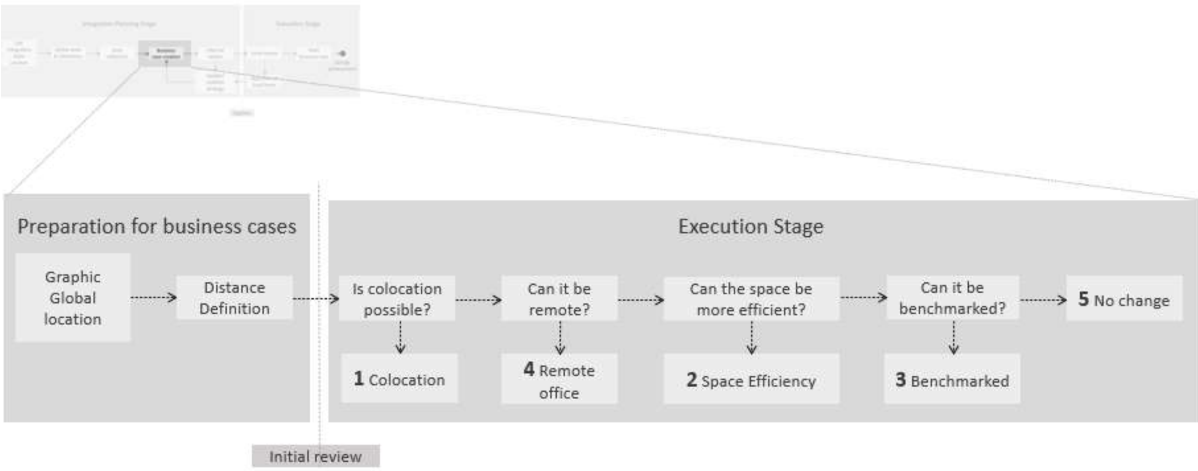


Figure 16 Detailed business case definition, by aithor

5.1 Prework

Once all the data is collected in one place, the next step is to define the location graphically and using numbers. For the CT/KC fusion, the preferred tool was google maps. Tracking all the site data using google sheets can be easily linked to a map where graphical analysis can be done fast and with the help of a computer and the internet. These two tools are available for business and private use and are easy to get. These tools don´t need to de downloaded since their online version is as effective and practical as the desktop version. The online files are automatically updated to the cloud, and all the team can see the changes on a real team. They are helping managers and other members to see them in real-time progress.

For the terms of this thesis, we will use the Finland locations shown in Google Maps for Cargotec and Konecranes. Their HQ is located in this country, and their history and focus are similar. The information used in the following case study was collected directly from Google maps and not from the private internal portfolio of the companies to avoid showing internal data. There are 15 Cargotec sites (closed or open) and more than twenty sites for Konecranes. For practical reasons, the case study will track the 15 Cargotec sites and only 20 Konecranes. The following chapters will show the methodology to achieve the most efficient strategy for integrating two companies' real estate portfolios. However, rent numbers, square meters, headcount and main uses will be fictitious since that is protected internal data. The annual rent amount calculation was taken from the numbers shown in the CBRE report for the Finnish market, stating that the prime industrial gross rent is 13 euros per square meter per month (Niemist, 2021). The following table shows all the data that will be analyzed to explain the methodology. This is an example of how the data can be tracked into one portfolio.

Table 1 Initial Case Study data

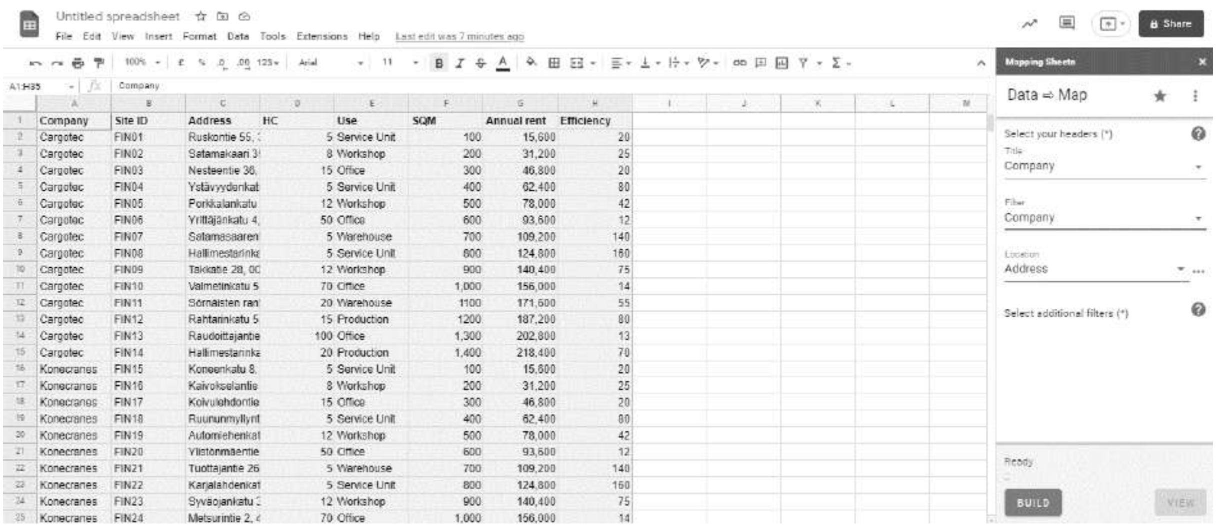
Company	Site ID	Address	HC	Use	SQM	Annual rent	Efficiency
Cargotec	FIN01	Ruskontie 55, 33710 Tampere	5	Service Unit	100	15,600	20
Cargotec	FIN02	Satamakaari 35 V18, 00980 Helsinki	8	Workshop	200	31,200	25
Cargotec	FIN03	Nesteentie 36, 21200 Raisio	15	Office	300	46,800	20
Cargotec	FIN04	Ystävyydenkatu 2, 21200 Raisio	5	Service Unit	400	62,400	80
Cargotec	FIN05	Porkkalankatu 5, 00180 Helsinki	12	Workshop	500	78,000	42
Cargotec	FIN06	Yrittäjänkatu 4, 44150 Äänekoski	50	Office	600	93,600	12
Cargotec	FIN07	Satamasaarentie 35, 00980 Helsinki	5	Warehouse	700	109,200	140
Cargotec	FIN08	Hallimestarinkatu 6, 20780 Kaarina	5	Service Unit	800	124,800	160
Cargotec	FIN09	Takkatie 28, 00370 Helsinki	12	Workshop	900	140,400	75
Cargotec	FIN10	Valmetinkatu 5, 33900 Tampere	70	Office	1,000	156,000	14
Cargotec	FIN11	Sörnäisten rantatie 23, 00500 Helsinki	20	Warehouse	1100	171,600	55
Cargotec	FIN12	Rahtarinkatu 5, 00980 Helsinki	15	Production	1200	187,200	80
Cargotec	FIN13	Raudoittajantie 1, 06450 Porvoo	100	Office	1,300	202,800	13
Cargotec	FIN14	Hallimestarinkatu 6, 20780 Kaarina	20	Production	1,400	218,400	70
Konecranes	FIN15	Koneenkatu 8, 05800 Hyvinkää	5	Service Unit	100	15,600	20

Konecranes	FIN16	Kaivokselantie 3, 01610 Vantaa	8	Workshop	200	31,200	25
Konecranes	FIN17	Koivulehdontie 17, 01510 Vantaa	15	Production	300	46,800	20
Konecranes	FIN18	Ruununmyllyntie 13, 13210 Hämeenlinna	5	Service Unit	400	62,400	80
Konecranes	FIN19	Automiehenkatu 30, 33840 Tampere	12	Workshop	500	78,000	42
Konecranes	FIN20	Ylistönmäentie 24, 40500 Jyväskylä	50	Office	600	93,600	12
Konecranes	FIN21	Tuottajantie 26 D, 60100 Seinäjoki	5	Warehouse	700	109,200	140
Konecranes	FIN22	Karjalahdenkatu 22 D, 94600 Kem	5	Service Unit	800	124,800	160
Konecranes	FIN23	Syväojankatu 3 A, 87700 Kajaani	12	Workshop	900	140,400	75
Konecranes	FIN24	Metsurintie 2, 42300 Jä-msänkoski	70	Office	1,000	156,000	14
Konecranes	FIN25	Vanha Porvoontie 229, 01380 Vantaa	20	Warehouse	1100	171,600	55
Konecranes	FIN26	Kalkkipetteri, Kievarintie 23, 08700 Lohja	15	Production	1200	187,200	80
Konecranes	FIN27	Aitolahdentie 75, 33580 Tampere	100	Office	1,300	202,800	13
Konecranes	FIN28	Asemantie 5, 13720 Parola	20	Production	1,400	218,400	70
Konecranes	FIN29	Askonkatu 13, 15100 Lahti	5	Service Unit	100	15,600	20
Konecranes	FIN30	Lypsyniemenkatu 5, 57200 Savonlinna	8	Workshop	200	31,200	25
Konecranes	FIN31	Alakatu 18, 55800 Imatra	15	Office	300	46,800	20
Konecranes	FIN32	Karpalotie 9, 90820 Oulu	5	Service Unit	400	62,400	80
Konecranes	FIN33	Jänismaantie 25, 67800 Kokkola	12	Workshop	500	78,000	42
Konecranes	FIN34	Poratie 16, 48400 Kotka	50	Production	600	93,600	12

Location

Once the data is collected, it is efficient to have all the sites on a map. Today, tons of mapping tools are available for free on the internet. However, for the tracking method to be compatible with the data collector file (Google Sheets) and the presentation tool (google slides), the device used for this thesis will be google maps. The idea behind locating sites on a map is to evaluate how close the sites are located graphically. With the help of the “Mapping Sheets” from google, we will identify locations in a map, together with the main characteristic that will be analysed to create the synergies. First, the tool called Mapping Sheets should be installed into Google Sheets. By going to Google Workspace Market and looking for the app, the Add-on is installed on the google account linked to the google sheet document. Then, go back to the datasheet collector and select all the data to be explored.

Then select the tab *Tools* followed by *Mapping sheets*. A window will open, requesting the desired name of the map, with which categories you want to classify the information and the last will request for the column that indicates the address that the map will use for the sites. In *Figure 17*, we can see the window with the initial variables already introduced. We will use two maps for this case study—the first one uses the filter per company. This will help the CRE integration team to understand the initial distribution of all the sites in Finland.



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Cargotec	FIN02	Satamakaari 3	8	Workshop	200	31,200	25
Cargotec	FIN03	Nesteentie 38,	15	Office	300	46,800	20
Cargotec	FIN04	Ystävyydenkat	5	Service Unit	400	62,400	80
Cargotec	FIN05	Porkkalankatu	12	Workshop	500	78,000	42
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Konecranes	FIN22	Karjalahdenkat	5	Service Unit	800	124,800	160
Konecranes	FIN23	Syväojankatu	12	Workshop	900	140,400	75
Konecranes	FIN24	Metsurintie 2,	70	Office	1,000	156,000	14

Figure 17 Creation of map analysis

All 34 locations are on the map, as shown in *Figure 18.* Each pin represents one site. The red ones are the Konecranes´ sites, and the blue ones are Cargotec. As a brief analysis, Konecranes has more locations throughout Finland and Cargotec is focused in the south. The yellow circle in Helsinki means ten sites in that rea, but the visualisation distance is too small to see all the pin drops separately. Also, in the left section, the filters are shown. There were fourteen Cargotec sites and twenty Konecranes, meaning that all the elements included in our lists had an actual address. Google was able to give a recorded location in their database. Each pindrop contains all the data that *Table 01* shows—f*igure 19* on the example of one of the most prominent offices for Cargotec. While doing the synergy strategy, it is essential to have all the needed information as fast and straightforward as possible.

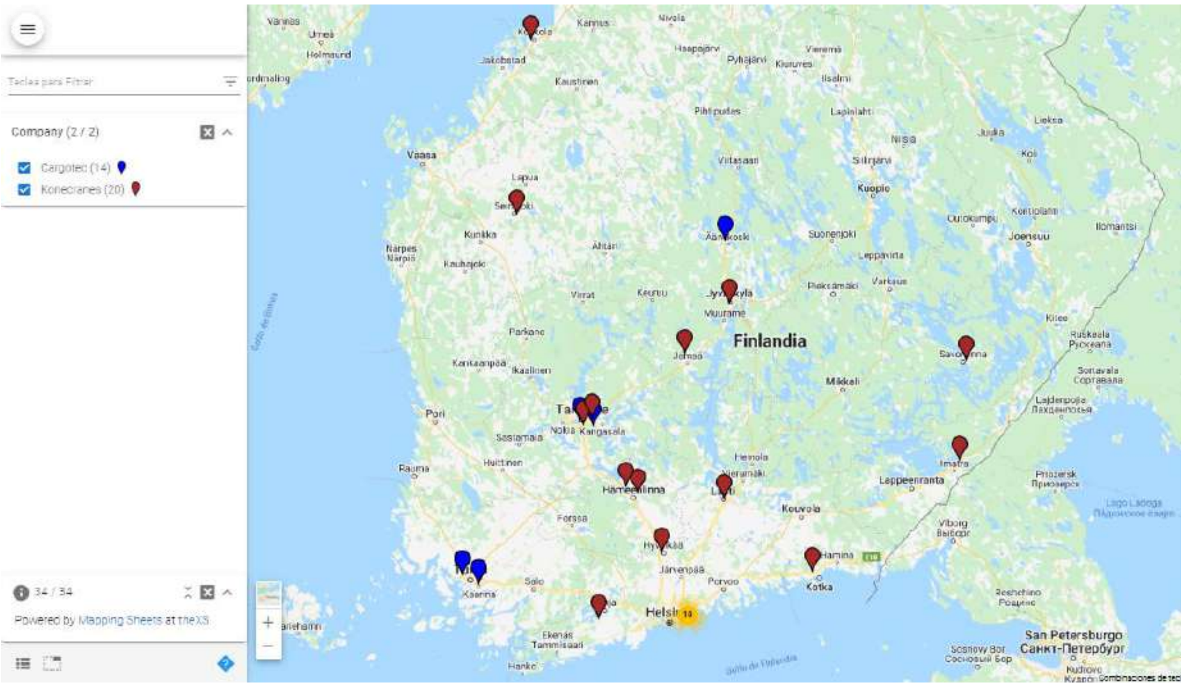

Figure 18 Map with Company filters

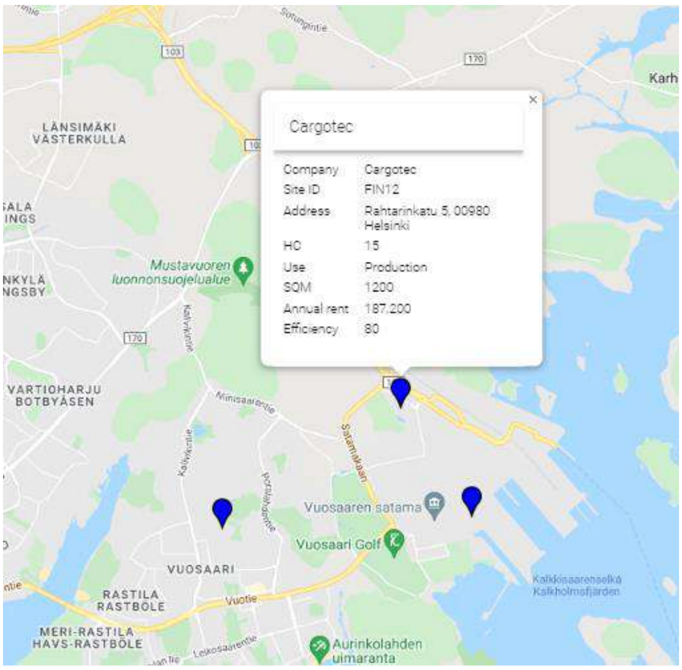

Figure 19 Site information in Map

The second map recommended for the analysis is to filter all the sites by use. This will give a swift and easy understanding of the risk of all the suggested colocations. While developing the synergy strategy is to track all the possible options and define a risk depending on the size, use, and headcount. Like that, all the possibilities will be proposed to the leading management team, and once they are accepted, the CRE integration team will look for a way of making them accurate with local managers. As shown in *Figure 20*, the blue pins are ten and represent the offices. Eight aqua pins represent service units. Eight pins represent the workshop, four green warehouse pins and four red for production. This data analysis is convenient since we can already see that possible collocation will happen in Tampere, Turku and Helsinki. Also, several offices are pretty much together in the centre of Finland. After doing the distance analysis and country division of tabs, we will go back to these maps. However, we already know that Finland will offer several opportunities for real estate synergies. This map will benefit the synergy analysis since it does not matter what company owns the location.

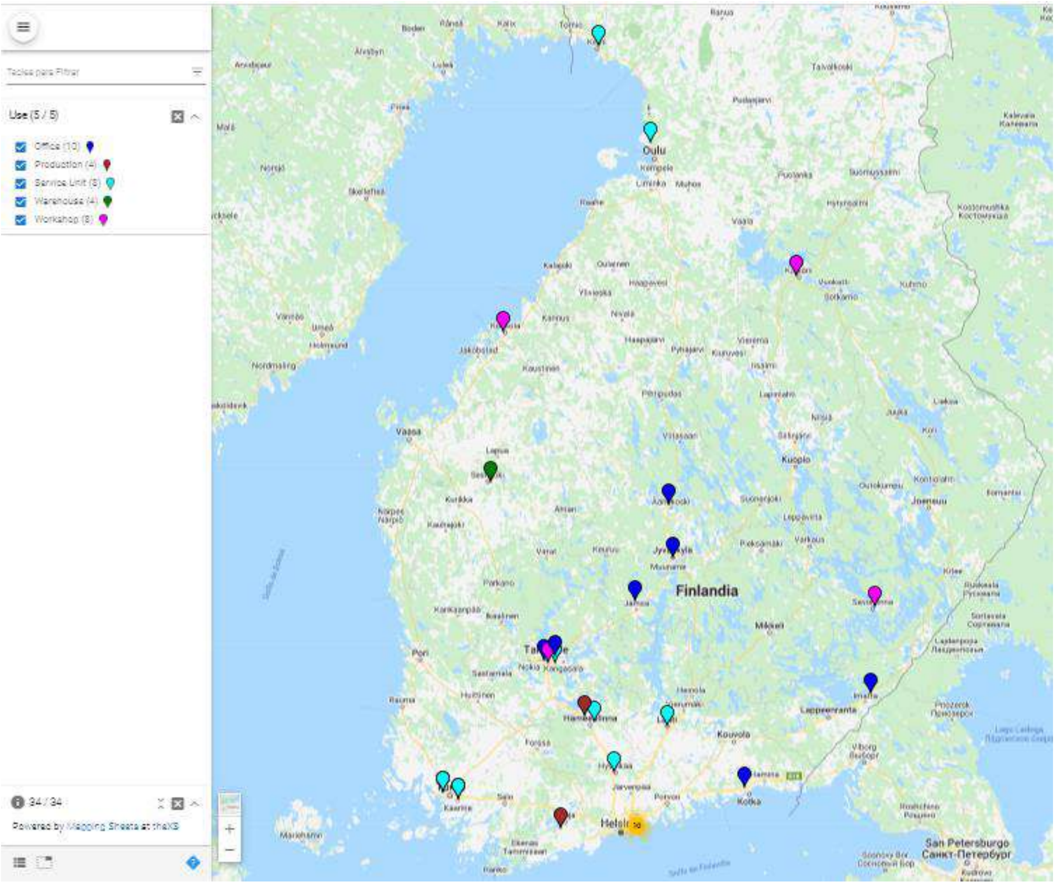

Figure 20 Map with usage filter

Distance definition

Once locations are placed on a map, it is essential to know the distance between all of them. Google Sheets is a very functional tool since the functions inside the file can be easily programmed. The first step is to include the formula for google maps inside the file we will use to analyse the distance. The scripts can be edited using the Google Apps Script and easily accessed through the same Google Sheet App. By going to Extensions > Apps Script. Once the new tab opens, as shown in *Figure 21*, the programming needs to be designed.

Figure 21 App for programming formulas

Several formulas can be used for real estate purposes in this app. It will depend on the output needed. The procedure used in this case study calculates the travel time between two addresses and gives the result in hours by car. However, other examples can be calculating the distance in any measurement, latitude and longitude of a specific point, getting an address from GPS coordinates or even getting the complete address only using the zip code. Depending on the criteria to define the synergies will be which script will run in the tab. The reason for choosing the hours requirement was because of the reason explained in chapter 4.7.1.

Nevertheless, distance factors can also be used. Still, we cannot assume that 20 kilometres will take the same time for commuting in New Dehli or Mexico City as in Stokholm or the United Estates. The script needed to include in the App Script for connecting two addresses in hours is (Agarwal, 2021)

:

```
function GOOGLEMAPS(start_address,end_address,return_type) {
 // improvements needed
  var mapObj = Maps.newDirectionFinder();
  mapObj.setOrigin(start_address);
  mapObj.setDestination(end_address);
  var directions = mapObj.getDirections();
  var getTheLeg = directions["routes"][0]["legs"][0];
  var meters = getTheLeg["distance"]["value"];
  switch(return_type){
  case "miles":
return meters * 0.000621371; break; case "minutes": // get duration in seconds
var duration = getTheLeg["duration"]["value"]; //convert to minutes and return
return duration / 60; break; case "hours": // get duration in seconds
var duration = getTheLeg["duration"]["value"];
//convert to hours and return
return duration / 60 / 60; break; case "kilometers": return meters / 1000; break; default:
return "Error: Wrong Unit Type";
   }
```

As you can see in the formula, the script will also give us the distance in minutes, hours, kilometres or meters. Any other output will be marked as an error. Once the function is copied in the Apps Script, click on the implement button, and the file will now integrate the new script. Copy all the addresses into one column in a second tab and transpose them as a row. Then you need to call the function by typing =GOOGLEMAPS(“cell of address 1”, “cell of address 2”, “hours”). The formula will look like what *Figure 22* shows. Then by copying and pasting the formula to all the possible combinations, all the distances can be tracked. The idea is to calculate all the spaces between all the sites. The result will appear as an hour lapse, meaning that everything bigger than one is more than an hour and less than one are minute.

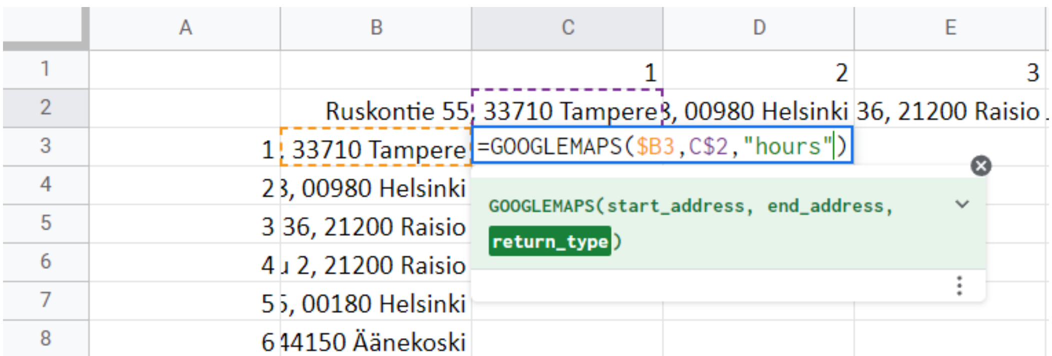

Figure 22 Formula for distance calculation

The result from the example shown in the *Figure 22* formula was 0 since it calculated the distance between the same addresses. The procedure will be copied throughout the 34 columns and 34 rows. And at the end, the table will show the squared length numbers. While doing the distance analysis, only half of the spaces will be studied since the other half is the same. In a fix described previously, the top right half will show one-half of the data, and the bottom left will show the other. They will be divided by a diagonal of distance 0. The conditional colouring of cells will be needed to make this analysis more accessible and find a short distance between two sites easily. Let's determine that the space of 0 will colour the cell grey. The shorter than one distance will be yellow since they are the ones that interest this case study the most. The rest of the distances greater than one will be light blue, so they don´t stand out. This conditional colouring can be quickly done with the dependent format section. The values can be set as shown in *Figure 23*.

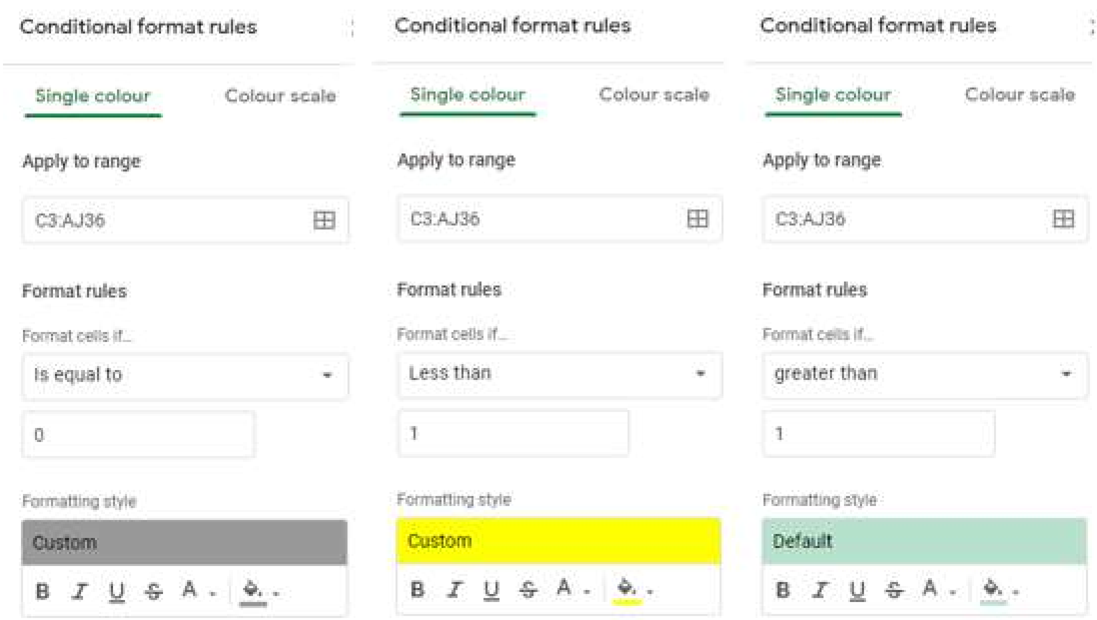

Figure 23 Conditional formats for colouring

Once all the possible combinations are done, the cells include conditional formatting, and all the possible colocations can be planned. However, there has to be an order to analyze all the data. The addresses were ordered alphabetically, meaning the physically close sites are spread all over the table. For this reason, first, the initial analysis should be done. The close locations will need to be analysed separately.

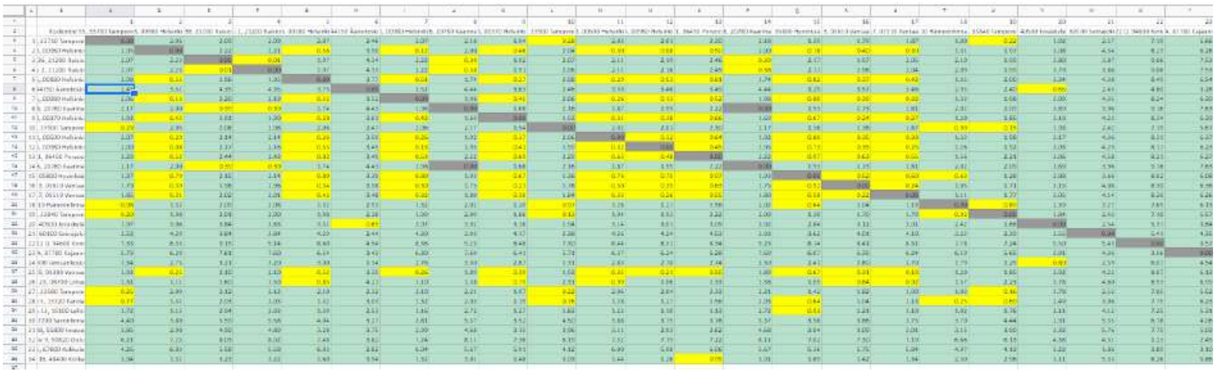

Figure 24 Table of distances with colours

Figure 24 shows all the distances between all the sites. As mentioned previously, only one-half of the table is helpful. The other half is a duplication. Let's look closer at some results to understand this. *Figure 25* shows the comparison of the first four sites´ distances. The Tampere and Helsinki site is not close to any of the places included in the example. Cells C4 and D3 show the same numbers. Cell C4 shows the distance from the Helsinki site to the Tampere location, and cell D4 displays the distance from the Tampere to the Helsinki site. That will be the same for the rest of the table. The Figure shows two spots that are in Raisio. The distance between them is less than one hour, 0.1 of an hour, meaning 6 mins away driving by car. These two sites passed the first argument to be collocated. The other two sites will either look for other places to collate or go deeper for another synergy strategy.

	A	B	C	D	E	F
1			1	2	3	4
2			Ruskontie 55, 33710 Tampere	Satamakaari 35 V18, 00980 Helsinki	Nesteentie 36, 21200 Raisio	Ystävyydenkatu 2, 21200 Raisio
3	1	Ruskontie 55, 33710 Tampere	0.00	2.06	2.09	2.09
4	2	Satamakaari 35 V18, 00980 Helsinki	2.05	0.00	2.22	2.21
5	3	Nesteentie 36, 21200 Raisio	2.07	2.23	0.00	0.01
6	4	Ystävyydenkatu 2, 21200 Raisio	2.07	2.23	0.01	0.00

Figure 25 Detailed table of distances with colours

As seen in Figure 24, several locations are pretty close, so the filter function will now be needed since the analysis will require removing the blue cell to avoid confusion. The filter is set in all columns and needs to be settled only to show the rows they have one or less in the distance calculation.

Satamakaari 35 V18, 00980 Helsinki
2.06
0.00
2.23
2.23
0.55
3.51
0.13
2.00
0.43
2.05
0.29
0.08
0.52
2.00
0.79
0.39
0.31
1.32
1.98
3.06
4.29
8.35
6.29
2.75
0.25
1.11
2.09
1.31
1.15
3.80
2.98
7.23
6.03
1.31

	A	B	D
1			2
2			Satamakaari 35 V18, 00980 Helsinki
4	2	Satamakaari 35 V18, 00980 Helsinki	0.00
7	5	Porkkalankatu 5, 00180 Helsinki	0.55
9	7	Satamasaarentie 35, 00980 Helsinki	0.13
11	9	Takkatie 28, 00370 Helsinki	0.43
13	11	Sörnäisten rantatie 23, 00500 Helsinki	0.29
14	12	Rahtarinkatu 5, 00980 Helsinki	0.08
15	13	Raudoittajantie 1, 06450 Porvoo	0.52
17	15	Koneenkatu 8, 05800 Hyvinkää	0.79
18	16	Kaivokselantie 3, 01610 Vantaa	0.39
19	17	Koivulehdontie 17, 01510 Vantaa	0.31
27	25	Vanha Porvoontie 229, 01380 Vantaa	0.25

Figure 26 Satamakaari Helsinki site distances

Once the filter is applied, it can be easily observed that the Helsinki site can be collocated with eleven other sites. The table includes numbers indicating which rows and columns are the sites to make the tracking more manageable. These numbers will be used while understand which location belongs to which colocation group. As observed in Figure 24, there is more than one possible collocation, and each combination has several sites. The subgroups will be divided according to their uses to understand the most realistic option to collocate once the initial groups are selected. As described in chapter 4.4, depending on the use of the synergy risk to come to reality. After the use analysis, then a detailed collocation study will be done. By analysing the rest of the factors, like square meters, headcounts and end of the lease agreements, the CRE integration team can decide which sites will be closed and which will receive them. The other three synergy strategies (efficiency, remote office or benchmarking) will be proposed for areas farther than one hour's driving distance. The idea is to plan all the possible synergies even if it is unlikely to happen.

5.2 Business cases

When the portfolio has a significant size and is distributed worldwide, it is important to divide it into regions/sections for more controllable analysis. Each integration team should decide which is the best approach, depending on the site distribution worldwide. In the case of the CT/KC fusion, the division was done by countries. This was because of synergies throughout combined countries (especially in Europe). Colocations and allocations from a human resources point of view are more challenging due to taxes and insurance. The analysis can be done in any spreadsheet or document tool (like Excel or google sheets). By having divisions, in this case, tabs, the information is more controlled, and errors are detected quickly.

Figure 27 Example of possible tabs

As shown in Figure 15, all the data is collected in one tab. In this case, *00_Data* was the tab collector of all the countries' information. Here the crucial data is collected from the rest of the tabs. The *B_Pivot* section was used to do the detailed analysis as a group of the complete data. The most critical tab to show results and summary element is the A_Front Page since it conglomerates the thorough research displayed. This page is also for tracking mistakes in the data and country section. Mistakes can happen when the sites' information is updated and the synergy action reanalyzed. The process followed for the CT/KC fusion was only to be capable of editing the information in the country section. The summary, pivot and complete data tabs will feed automatically from the countries´ tabs. Another benefit is that the updates are done once in the file. If they were not done correctly, the rest of the linked data would look differently, so a detailed fix must be done. This method was done with google sheets, so tracking changes is more straightforward than another office tool.

Collocations

Colocations are the most challenging to execute but the most beneficial for the business. For this reason, this is the first option for all the synergy definitions. The first task for defining the business cases is to understand the distance between all the sites. All possible collocations are suggested by comparing the driving distance described in the previous chapters. Once the groups of sites that fulfil the distance requirement are detected, the colocations must be proposed. Are reviewed in chapter 4.4, where the combination of sites and the risks of placing them together was analyzed. The most straightforward combination suggests it is where two or more offices are collocated together. This combination should immediately detect and mark as a pretty optimistic synergy. The rest of the groupings will also be tracked. A deeper risk analysis will be included. In chapter 5.5, this risk analysis definition will be detailed.

Table 2 Colocation of basic data

	Company	Site ID	Address	HC	Use	SQM	Annual rent	Efficiency
2	Cargotec	FIN02	Satamakaari 35 V18, 00980 Helsinki	8	Workshop	200	31,200	25
5	Cargotec	FIN05	Porkkalankatu 5, 00180 Helsinki	12	Office	500	78,000	42
7	Cargotec	FIN07	Satamasaarentie 35, 00980 Helsinki	150	Office	2000	300,000	13
9	Cargotec	FIN09	Takkatie 28, 00370 Helsinki	12	Workshop	900	140,400	75
11	Cargotec	FIN11	Sörnäisten rantatie 23, 00500 Helsinki	20	Warehouse	1100	171,600	55
12	Cargotec	FIN12	Rahtarinkatu 5, 00980 Helsinki	15	Production	1200	187,200	80
13	Cargotec	FIN13	Raudoittajantie 1, 06450 Porvoo	15	Office	300	46,800	20
15	Konecranes	FIN15	Koneenkatu 8, 05800 Hyvinkää	5	Service Unit	100	15,600	20
16	Konecranes	FIN16	Kaivokselantie 3, 01610 Vantaa	8	Workshop	200	31,200	25
17	Konecranes	FIN17	Koivulehdontie 17, 01510 Vantaa	100	Office	1,300	202,800	13
25	Konecranes	FIN25	Vanha Porvoontie 229, 01380 Vantaa	20	Warehouse	1100	171,600	55

Each colocation synergy strategy will have its unique code made of the country code, the synergy number and whether the sites will be closed. Let's continue with the example of the Helsinki site. There are ten other sites less than one hour away from the site FIN02 as seen in *Figure 26*. It will be convenient to think that the strategy will close all ten and move all the people to FIN02. However, this is not a realistic solution.

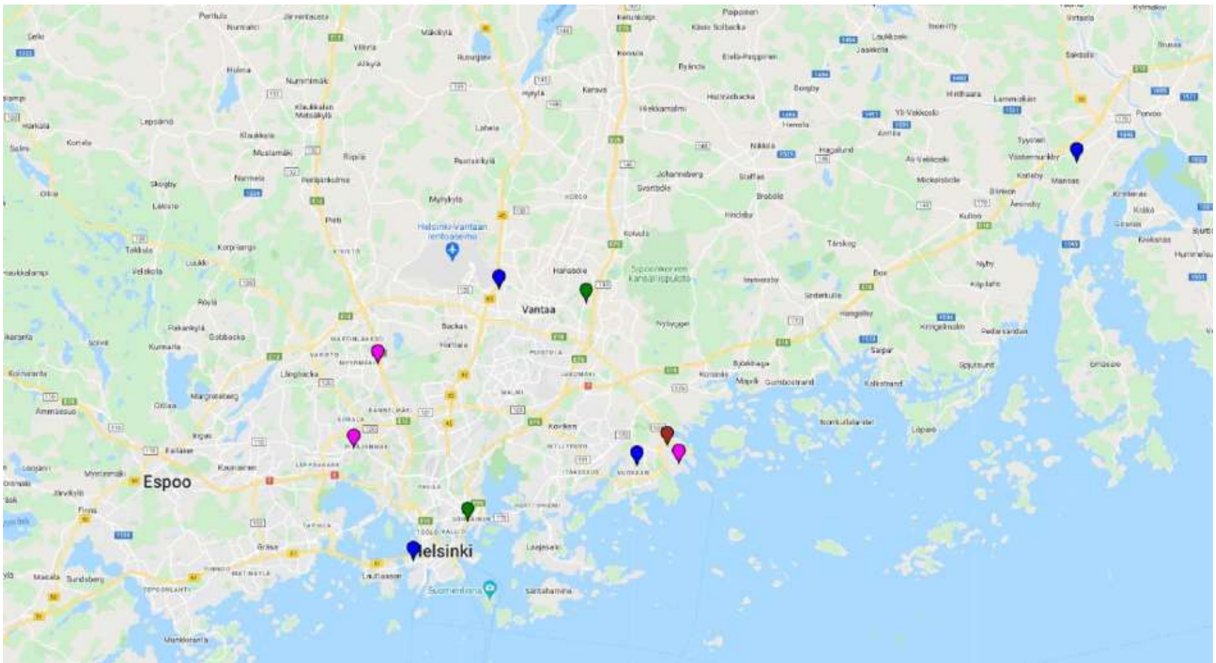

Figure 28 Map of locations close to FIN02, GoogleMaps

As we have seen on the table, we have all kinds of sites and sizes. First, locations close to FIN02 have to be filtered into an individual table, as shown in *Table 2*. This needs to be done so the detailed data of all the sites is analyzed, and more than one collocation should be proposed. We can observe that the FIN02 site is a workshop, meaning this is a risky collocation to be presented. However, we can keep that four offices comply with less than the one-hour requirement in the surroundings. If we go into the detail of those four offices (FIN05, FIN07, FIN13 & FIN17), we can see that the driving distance between them, removing the initial site FIN02, remains less than one hour. This is one of the best cases this strategy can have since it means that all the offices can be collocated into one of them. Nevertheless, a deeper analysis will be done to understand which sites can be closed and which will receive the others.

Once the distance is defined and the group of sites placed together is established, a deeper analysis must be done. To understand which locations are closed and which will receive the employees from them, the following aspects will influence in the suggested order:

1) Which site is the biggest? The small ones will move to the big ones.

2) If they have similar sizes, which site has the most headcount? The ones that have fewer employees will be moved.

3) If they have a similar amount of employees, which has the highest efficiency (sqm/hc)? The one with the highest efficiency number will receive the employees of the others.

Table 3 Colocation tracking information

Site ID	Address	HC	Use	Total SQM	Rent	Efficiency
FIN05	Porkkalankatu 5,Helsinki	12	Office	500	78,000	42
FIN07	Satamasaar. 5, Helsinki	150	Office	2000	300,000	13
FIN13	Raudoi 1, Porvoo	15	Office	300	46,800	20
FIN17	Koivulehd. 17Vantaa	100	Office	1,300	202,800	13

Figure 29 Maps of offices close to FIN02, Google Maps

As observed in Table 3, the colocation strategy suggests that three offices will be collocated into FIN07. It is the most prominent site compared to the others and is the one that has most of the employees. However, looking into the map to understand the site's location is recommended before suggesting the collocation. As observed in Figure 29, we can see that the driving distance strategy gave us an accurate colocation strategy for three sites. However, for site FIN13, the collocation strategy might not work since it is within the inside limits of the one drive hour. This site will be removed from colocation 01 since a better plan can be proposed.

Table 4 Colocation definition

Site ID	Synergy	Total HC	Total SQM	Total rent	Savings	Probability
FIN05	1.01(closure)					
FIN07	1.01	262	3,800	580,000	278,000	80%
FIN17	1.01(closure)					

In our example, the site id FIN07 will receive the employees from FIN05 & FIN07. The estimated total cost of the group and the total HC, the total of previous square meters, and the total efficiency will be included in the same table as seen in Table 4. The collocation sum of all the factors is needed. It is a practical way to understand how the separate numbers look and the potential benefits of the colocation strategy to the sites involved. We have a total HC of 262 in 3,800 sqm, in this case, having a total efficiency of 3,800 / 262= 14.5. As described in the previous chapter, the optimum space efficiency for offices is 12 HC/sqm, meaning this site group has a significant opportunity to improve this real estate KPI. The rest of the sites will need a similar analysis, so all the locations with other items close to each other will need a colocation strategy. The following table will show our study group's total amount of collocations possible. All the analysis is done similarly to the 1.01 method. In addition, keep in mind that the way to track colocations is by naming it with the number one, and the decimal is the detailed colocation symbol, so the next group will be called 1.02, the following 1.03, and so on. In the group of data collected, there are seven possible collocations.

Table 5 Colocation details

	Site ID	Synergy	Total HC	Total SQM	Total rent	Savings	Efficiency	Probability
7	FIN07	1.01	212	3,100	€471,600	€171,600	15	80%
5	FIN05	1.01(closure)						
17	FIN17	1.01(closure)						
25	FIN25	1.02	25	1,800	€280,800	€109,200	72	30%
11	FIN11	1.02(closure)						
9	FIN09	1.03	25	1,500	€234,000	€93,600	60	30%
2	FIN02	1.03(closure)						
16	FIN16	1.03(closure)						
27	FIN27	1.04	112	1,800	€280,800	€78,000	16	80%
10	FIN10	1.04(closure)						
18	FIN18	1.05	20	700	€109,200	€46,800	35	50%
1	FIN01	1.05(closure)						
8	FIN08	1.06	20	2,000	€312,000	€187,200	100	50%
4	FIN04	1.06(closure)						
24	FIN24	1.07	190	3,700	€577,200	€421,200	19	80%
6	FIN06	1.07(closure)						
20	FIN20	1.07(closure)						

It is essential to highlight that production sites were not included in the colocation strategy, even if they were inside the one-hour driving strategy. The reason is that the probability of colocations involving a production site (receiving locations or moving to another site) is pretty low. The probability columns are taken from the combinations reviewed in section 4.7. Please note that the highest recommended probability is 80%. Even though the colocation strategy might look pretty straightforward in numbers, the local business might include additional factors when analysing the business case.

After doing individual analysis for all sites, we can suggest that ten out of seventeen sites can be closed, and a potential of one million euros savings. However, it is a risky conclusion. That is why adding the probability to all the collocations suggested is crucial.

Efficiency

From our initial list of thirty-four sites, we have already given a strategy to nineteen locations (including the two production sites assigned with a “no change” strategy). The following approach optimises offices that can´t be moved into a serviced / coworking office. Use the filter tool to locate the remaining offices left in the site list. In the example used in this business case, four offices don´t have any other site close to them, not even from a different use. These offices are the potential efficiency strategy target.

Table 6 Space Efficiency strategy

#	Site ID	HC	SQM	Rent	Efficienc.	Synergy	Savings	Probability
3	FIN03	15	400	€49,400	27	TBC		
13	FIN13	13	300	€46,800	23	TBC		
31	FIN31	10	200	€44,000	20	TBC		
34	FIN34	50	600	€93,600	12	2.01	€28,080	80%

However, after assuring that only offices are included, the second requirement is that the office needs to have more than 15 employees. In our business case, we only have one site, far away from any other site, with more than 15 employees inside. This strategy aims to reduce the space since the new way of working is applied. In chapter 4.6, the conclusion was that all the offices should reduce their area by 30%.

The site FIN34 has all the requirements, as shown in *Table 6*. The strategy number is 2.01, which is included in Synergy's column. The rest of the sites will have a different strategy, but in this stage, we will just add *TBC* not to lose track of these locations. This strategy works without the combination of other sites. It simply assumed that 30% of the asset is no anymore in use, so that percentage is discounted from the annual rent. Like the other synergies, the highest probability assigned is 80% since everything matches even in theory and numbers. In reality, other factors can affect the plan.

Closure / remote office

Since the offices are already detected, the next step is to assign the *TBC* sites with the closure strategy. As reviewed in 4.7.2, the closure strategy does not mean that the offices are unnecessary or that the employees will be fired. It is a way of changing how these small offices are treated, and more updated solutions can be adapted instead of paying a standard rent for it. Strategies like coworking/tech spaces for meetings or shared offices are the solution.

Table 7 Small / closure offices

#	Site ID	HC	SQM	Synergy	Savings	Probability
3	FIN03	15	400	4.01	€49,400	80%
13	FIN13	13	300	4.03	€46,800	80%
31	FIN31	10	200	4.02	€44,000	80%

In the case study, three sites with this solution are proposed. The total savings is the complete elimination of all the annual rents of the sites. Together with the new way of working, hybrid working has enabled the CRE team to encourage home office, as reviewed in chapter 4.6. This new working strategy was adapted into the CT/KC strategy by proposing all the excess space and underutilised small offices. Nevertheless, this business case requires detailed external help since options to offer collaboration spaces for the employees are needed.

While developing the business cases in the CT/KC strategy, an external real estate company helped the integration CRE team understand which areas the coworking / serviced spaces were a good idea. This was because the home office concept was not received in the same country. The offices located in Helsinki were a fast and very probable solution since it is not a new concept. Nevertheless, while developing the business cases in the north of Finland, the idea of removing the owned office space to senior employees can even mean they will quit their job. In this business case, all the sites are in cities where the home office concept is applicable. For this reason, the probability will be 80%, which is the highest recommended.

Benchmarking

From thirty-four sites, we have already assigned a synergy strategy to twenty-two. This means that 64% of the sites will fit into the first three strategies, all of the offices included. Now is the time to assign other techniques than colocation to the rest of the uses. The benchmarking solution is always a possibility, especially when the renovation of a lease agreement is in place. Nevertheless, this is the last option to analyse since it is the one that offers fewer savings of the synergies. Also, it involves a very low probability since sites with special facilities are included (like workshops or service units). The facilities inside can be so specialised that no other close location (especially if it is cheaper) may have it. The headcount and efficiency are insignificant for this analysis since the primary use is not dedicated to people but service and equipment.

Table 8 Benchmarking strategies

#	Site ID	HC	Use	SQM	Annual rent	Savings	Probability
19	FIN19	12	Workshop	500	€78,000	€7,800	30%
21	FIN21	5	Warehouse	700	€109,200	€10,920	50%
22	FIN22	5	Service Unit	800	€124,800	€12,480	30%
23	FIN23	12	Workshop	900	€140,400	€14,040	30%
29	FIN29	5	Service Unit	100	€15,600	€1,560	30%
30	FIN30	8	Workshop	200	€31,200	€3,120	30%
32	FIN32	5	Service Unit	400	€62,400	€6,240	30%
33	FIN33	12	Workshop	500	€78,000	€7,800	30%

In the business case, there are eight benchmarking possibility strategies. However, reporting the savings is only 10% of the original annual rent. These strategies should be defined carefully since a deep understanding of the market is needed. While developing the business case, a detailed analysis of the initial investment and surrounding market is necessary. In addition, a strong CRE team to renegotiate the renewal of the lease agreement might be beneficial. Landlords will need a solid argument to lower the prices, especially for sites that have been used for several years. Nevertheless, it is possible during an M&A and needs to be included with a very low probability of happening.

No changes sites

Four out of thirty-four were production sites in the business case, meaning only 11%. However, they might represent a more significant percentage of square meters since they tend to be the largest sites in the portfolio. 52,000 out of 243,000 represents 22% of square meters dedicated to production in this business case. In addition, they might also represent a very significant percentage of the total rent amount. In this case, 811,200euros of 3,782,600. Representing 21% of the total annual lease expense. In this stage of the integration plan, these sites are not recommended to collocate or define another strategy since they are the most complex.

Nevertheless, if collocation is rejected during the approval phase because of specific site details, the one-hour distance strategy will be analyzed again, including production sites. As observed in chapter 4.4.2, the collocations with production sites are possible but the riskiest. A complete closure is not recommended since it is where the core business occurs. Nevertheless, if collocations are not found around these production sites, space efficiency and benchmarking are also possible but have low probability.

Table 9 No changes sites

	Site ID	Use	SQM	Annual rent	Synergy
12	FIN12	Production	1200	€187,200	5
14	FIN14	Production	1400	€218,400	5
26	FIN26	Production	1200	€187,200	5
28	FIN28	Production	1400	€218,400	5

This strategy, represented by number five, will not show any savings or future actions. In this case study, these sites will not be analysed forward since it is assumed that the strategies defined in the previous chapters will be happening according to the probability given to each case.

Headquarters

Locating the headquarters was one of the most noted strategies during the CT/KC fusion. Both companies have a recently renovated and efficient HQ, so numerical analysis of the other sites is not enough to define the most optimal location for this site. In addition, the top management of both companies was especially interested in reviewing this business case, so additional arguments are needed for the definition.

First, the already reviewed colocation strategy should be done. The initial numbers will be understood, and the total SQM will be determined. However, an additional analysis of the external solutions should be understood. The CRE team needs to create a solid business case where internal and external options are analyzed, including a rough but realistic initial investment estimation. During the CT/KC merger, the following aspects were analysed:

a) **HQ existing map**

With the help of the local real estate consultancy, a map to locate an essential HQ in the city should be explored. The idea is to find the brand in an address where the name can be seen and demonstrate to the stakeholders is leading the market tendencies.

b) **Office updated tendencies**

Prioritizing collaboration spaces, shared meeting rooms with other tenants, inside cafeterias, gymnasiums, parking spots with electric power stations and other shared areas are essential elements to include in the analysis. This small detail will determine if the location is the most optimal for the new HQ.

c) **NewCo vision**

The new strategy might include the prioritization of sustainability aspects. In this case, a green lease agreement will benefit the new HQ definition. Other elements, like innovation and technology application, can be included while defining the new location for the HQ.

5.3 Risk factor definition

The risk factor has been mentioned through all the business case analyses as the probability of synergy. But how does this risk reflected in the synergy proposal? The primary reporting unit of this synergy strategy is the savings, so there is where the risk factor will be applied. The general idea is to subtract the risk from the savings. The higher the risk of the proposed synergy, the lower its probability, so the lower the savings will be presented. Office colocations and efficiency optimization will be the highest likelihood, but production synergies will be the lowest. The following table will show how is the probability translated to the risk factor. For tracking, reasons are essential to understand the number of sites with high, medium or low risk.

Table 10 Probability factor

Probability	Risk	Probability factor
80%	Low	0.80
50%	Medium	0.50
30%	High	0.30

In the analyzed business case, from a total of €3,782,600 of annual rent, a saving strategy of €1,161,320 is proposed. Nevertheless, this number is unrealistic and cannot even be shown to the initial reviewers. The probability factor should be added to each strategy according to the probability given after the analysis. Table 11 offers all the 20 synergy strategies detected in this business case. By adding the probability factor determined by the likelihood and risk of each synergy strategy, the individual saving reported from each proposal is reduced accordingly. From having a 30% cost reduction of lease expenses, the risk factor reduced the figure to 20%. This percentage is a more realistic factor since it already includes an individual analysis of how viable is each strategy.

Nevertheless, additional risk factors should be analysed after the business cases are approved since this strategy only analyses internal and numerical factors. Functional and independent elements from each site can increase/decrease the savings the integration CRE team will report. Nevertheless, the integration team can mention this, and a third party can define the different risk percentages.

Table 11 Saving definition with risk factor

Synergy	Total rents	Savings	Real estimated saving	Risk
1.01	€580,800	€280,800	€224,640	Low
1.02	€331,600	€160,000	€48,000	High
1.03	€202,800	€62,400	€18,720	High
1.04	€358,800	€156,000	€124,800	Low
1.05	€78,000	€15,600	€7,800	Medium
1.06	€187,200	€62,400	€31,200	Medium
1.07	€343,200	€187,200	€149,760	Low
2.01	€15,600	€4,680	€3,744	Low
2.02	€93,600	€28,080	€22,464	Low
3.01	€78,000	€7,800	€2,340	High
3.02	€109,200	€10,920	€5,460	Medium
3.03	€124,800	€12,480	€3,744	High
3.04	€140,400	€14,040	€4,212	High
3.05	€15,600	€1,560	€468	High
3.06	€31,200	€3,120	€936	High
3.07	€62,400	€6,240	€1,872	High
3.08	€78,000	€7,800	€2,340	High
4.01	€49,400	€49,400	€39,520	Low
4.02	€44,000	€44,000	€35,200	Low
4.03	€46,800	€46,800	€37,440	Low
	€3,782,600	€1,161,320	€794,456	
		31%	20%	

Table 12 Risk classification of the CRE strategy

Risk	COUNT of Synergy	SUM of Total rents	SUM of Savings	% of total savings
-	4	€405,600	€0	
High	9	€1,064,800	€275,440	23.72%
Low	8	€1,532,200	€796,960	68.63%
Medium	3	€374,400	€88,920	7.66%
Grand Total	**24**	**€3,782,600**	**€1,161,320**	**100.00%**

Table 12 is one of the most important outputs of the strategy suggested in this thesis. It compares the actual savings with the percentage of project risks. The idea is to assign a general risk classification to the complete strategy. First, let´s observe in detail column COUNT of synergy. Out of twenty methods (not twenty-two, since two are five´s, meaning they will not change) are classified as high-risk strategies. We can assume that since almost 50% of the plans proposed are high-risk, the complete methodology should have the same classification.

Nevertheless, that is not the correct approach. The main element to analyse in each plan is the savings, meaning those figures will indicate our accurate outputs. When the SUM of the savings column is observed in detail, it demonstrates an entirely different result. 800K euros savings out of 1M will be assigned to a low-risk project. 68% is more than half of the total savings amount, meaning our strategy's accurate risk classification is low. This demonstrates that our analysis was done correctly, and our final numbers will probably show actual savings in the future.

5.4 Defining saving reporting

Until this point, from which company is each site has been a detail not included in the analysis. However, during the CT/KC fusion, these elements were necessary. The top management decided they would like to classify the benefits from the merger according to the original company origin. The division can be straightforward for strategies that include one site (efficiency, small office & benchmarking). Each location's savings will automatically be assigned to the company that used to own/lease the asset. *Table 13* demonstrates the savings per company already with the risk factor, where Cargotec will give 40.60% and Konecranes 59.40% for strategies 2,3 & 4.

Table 13 Simple saving reporting per company

Company	2 (efficiency)	3 (benchmarking)	4 (closure)
Cargotec	-	-	€76,960
Konecranes	€26,208	€51,168	€35,200
Grand Total	€26,208	€51,168	€112,160

When calculating the savings for colocations, a different method should be used. The idea of the colocations is that employees will be moved from one or several offices to the unused space of a more significant location. For this reason, the shutdown site will still need to pay the rent, but the same corporation will receive it. The idea of the colocation saving reporting per unit will divide the expenses between the individual elements, and some might have negative numbers. Some sites receiving closed-site employees might have a more expensive cost per square meter. Nevertheless, the saving reporting is considered at a corporate level, so the sum of the total savings should be the same as the previous figures.

To make this calculation clear, let's continue with the case study. *Table 14* shows the results of the previously mentioned calculation. However, let's review it step by step. First, the saving per company of the site that will be receiving the sites will be estimated. Site 7 pays €150, so if it is extended to 500(Site 5) + 1,300(Site 17) sqm, those sites will pay Site 7 their sqm at the local price: (150*500)+(150*1300)= €270,000. Now, for calculating the savings for the other two sites, it is assumed that the savings will be directly from subtracting what they are paying today minus what they will pay in the new site. For Site 5, the formula will be 78,000-(150*500)= €3,000. For Site 7, the formula will be 202,800-(150*1300)= €7,800. If we add the risk factor of the strategy (0.80), we get the result from the column Savings part company with risk factor. By adding €2,400, €216,000 and €6,240, the total saving is the same as the previous amount of €224,640, which means that our calculations were done correctly.

Table 14 Savings per company 1.01

	Company	Synergy	HC	SQM	Annual rent	Total saving	Cost / sqm	Saving per company	Savings per company with risk factor
5	Cargotec	1.01(closure)	12	500	€78,000		€156	€3,000	€2,400
7	Cargotec	1.01	150	2000	€300,000	€224,640	€150	€270,000	€216,000
17	Konecranes	1.01(closure)	100	1300	€202,800		€156	€7,800	€6,240

Table 15 Savings per company for colocations

	Company	Synergy	Total saving	Savings per company
7	Cargotec	1.01	€224,640	€216,000
5	Cargotec	1.01(closure)		€2,400
17	Konecranes	1.01(closure)		€6,240
25	Konecranes	1.02	€48,000	€46,800
11	Cargotec	1.02(closure)		€1,200
9	Cargotec	1.03	€18,720	€18,720
2	Cargotec	1.03(closure)		€0
16	Konecranes	1.03(closure)		€0
27	Konecranes	1.04	€124,800	€124,800
10	Cargotec	1.04(closure)		€0
18	Konecranes	1.05	€7,800	€7,800
1	Cargotec	1.05(closure)		€0
8	Cargotec	1.06	€31,200	€31,200
4	Cargotec	1.06(closure)		€0
24	Konecranes	1.07	€149,760	€149,760
6	Cargotec	1.07(closure)		€0
20	Konecranes	1.07(closure)		€0
		Total:	**€604,920**	**€604,920**

Table 16 Total division of savings per company

	1 (colocations)	2(efficiency)	3(benchmarking)	4(small offices)	**Total**	
Cargotec	€274,560	€0	€0	€76,960	**€351,564**	44.25%
Konecranes	€330,360	€26,208	€51,168	€35,200	**€442,936**	55.75%
Grand Total	**€604,920**	**€26,208**	**€51,168**	**€112,160**	**€794,456**	

The saving reporting method where the savings are divided per company is a way to track the origin of the opportunities in an ordinated way. Also, if the savings are not happening as expected, it is easier to understand the reason and look for a solution when they are detected. The origin is pretty balanced in this business case since Cargotec will report 44% and Konecranes 55% of the total savings.

5.5 Timing definition

Consultancy companies give specific timing for reporting the benefits of the fusion. This timing is defined depending on the companies´ sizes and how related their business is. However, while developing the saving strategy, it is recommended to understand the accurate timings of the plan. Implementing the complete strategy will require several resources to develop each business case, get approval from all the stakeholders and do all the needed documentation to make the changes in each lease agreement. For this reason, dividing the saving reporting concerning the end of the lease agreements is recommended. When the actual lease agreements end is when the changes can be done. Otherwise, negotiations with the landlord and a legal team will be needed to modify the existing document.

Since the compilation of the rent amount is annual, the intelligent way to track the timing of the strategy savings is the same. However, for the CT/KC, it was suggested not to follow the savings not with the calendar year but for one year period. Let's assume that day one will be in May 2022. The first year will end in May 2022 and then start the second year. The objective of the timing strategy suggested in this thesis is to push all the integration strategies into the first three years. When the timing strategy is applied, let's go back to the business case analysis to see how the savings will behave. An additional column for tracking the actual lease expiry date is added. This column is also fed with random dates to do the timing analysis. For this stage, the timing for 2(efficiency), 3(benchmarking) & 4(small offices), the date used for timing tracking will be according to the particular lease agreement expiry date. Table 17 shows how the savings will behave through time in these three strategies.

Table 17 Timing for simple synergies

	2 (efficiency)		**3 (benchmarking)**		**4 (small office)**	
Year 1	-	-	€24,960	3	€39,520	1
Year 2	-	-	€11,232	1	-	-
Year 3	€26,208	2	€14,976	4	€72,640	2
Grand Total	**€26,208**	**2**	**€51,168**	**8**	**€112,160**	3

However, as observed in previous chapters, collocations report their figures differently. The sites documenting the colocation will be analysed separately for this timing reporting. The same principle of the lease expiry date is applied. Nevertheless, since several lease agreements are included inside each colocation, one of them should be prioritized. The timing for each colocation will be linked to the earliest lease expiry date that is incorporated into the group that forms the collocation. Let´s once again analyse colocation 1.01. As observed in *Table 18,* the three sites have different lease expiry dates. However, the earliest lease expiry date is May 2023, meaning that the complete colocation will be reported in Year 1.

Table 18 Colocation timing

	Site ID	Lease expiry date	Synergy	Year
7	**FIN07**	**September 2023**	**1.01**	**Year 1**
5	FIN05	May 2023	1.01(closure)	Year 1
17	FIN17	May 2025	1.01(closure)	Year 1
25	**FIN25**	**November 2023**	**1.02**	**Year 2**
11	FIN11	May 2024	1.02(closure)	Year 2
9	**FIN09**	**January 2024**	**1.03**	**Year 2**
2	FIN02	November 2022	1.03(closure)	Year 2
16	FIN16	March 2025	1.03(closure)	Year 2
27	**FIN27**	**March 2024**	**1.04**	**Year 2**
10	FIN10	March 2024	1.04(closure)	Year 2
18	**FIN18**	**September 2022**	**1.05**	**Year 1**
1	FIN01	September 2022	1.05(closure)	Year 1
8	**FIN08**	**November 2023**	**1.06**	**Year 1**
4	FIN04	March 2023	1.06(closure)	Year 1
24	**FIN24**	**September 2023**	**1.07**	**Year 1**
6	FIN06	July 2023	1.07(closure)	Year 1
20	FIN20	January 2023	1.07(closure)	Year 1

Table 19 Savings distribution through time/ strategy type

	1		2		3		4		Grand Total	
Year 1	€413,400	10	-	-	€24,960	€3	€39,520	1	**€477,880**	**14**
Year 2	€191,520	7	-	-	€11,232	€1	-	-	**€202,752**	**8**
Year 3	-	-	€26,208	2	€14,976	4	€72,640	2	**€113,824**	**8**
Grand Total	**€604,920**	**17**	**€26,208**	**2**	**€51,168**	**8**	**€112,160**	**3**	**€794,456**	**32**

After analyzing the case study information, we can observe that the distribution through all the strategies has a stable amount of savings and projects per year. 32 out of 34 sites have a plan, fourteen of them in year 1. The benefit behind this is that the big punch of savings (more than 50%) will happen in year one, so the profit of the fusion can be reported as fast as possible. Also, this table is suggested to track the integration planning since it demonstrates the distribution of projects as the synergy category. 600K out of 800K comes from colocations, meaning that the attention should be on this strategy since DayOne. The rest of the plan also will bring benefits to the fusion results. Nevertheless, they are secondary and so the priority they will have.

5.6 Priority definition

Once the complete analysis is done, the CRE integration team will have to prioritise the project they will focus. Once the timing per year is defined, the prioritization of projects will follow the subsequent arguments:

1. **Higher impact on the yearly saving report.**

The first focus should be on understanding what is needed for the business cases that represent the highest savings. In year 1, two projects represent more than 70% of that year's savings. Colocation 1.01 (€280,800) & 1.07(€187,200) are the main targets of year 1.

2. **Low-hanging fruits**

After the primary targets for each year are detected, the easy cases should begin. All the strategies involving offices are the more straightforward since the offices require a smaller investment to be changed than the rest of the uses. The closure of office FIN03 should be a low-hanging fruit since it is a small office in Riasio, a small town 15 minutes away from Turku. Turku has several co-working spaces, and even if the NewCo didn´t have another office to collocate with FIN03 while applying the new way of working strategies, the suggested plan could be easily achieved.

The following projects to be achieved are the remaining ones and will follow the same order as the timing definition described in the previous chapter. The lease expiry date is critical when defining the time to develop the individual business case. The idea is to avoid renewing any lease agreement after DayOne without the intervention of the CRE integration team.

5.7 Portfolio & synergy summary

Once the complete analysis is done, savings are reported correctly, and timing and prioritization are defined, a summary must be done to collect all the data into one or two slides. Like that, top management can understand the overall figures of the CRE integration strategy and approve each stage of the integration plan. The way how the CRE team decided to develop the summary was by diving it into two sections:

1. Actual data
2. Synergy strategy figures

With the help of pivot tables and linked cells, the CRE team could update the primary data, and automatically, the summary page will show the new figures. Like that, resources can focus on detailing the business cases and not doing reports to show the integration team's progress. In addition, it is a way to verify that the information is correct since pivot tables will show an error message if a detail is missing.

1. Actual data:

In this section, the existing numbers are shown. The idea is to demonstrate in some figures what the actual portfolio of both companies looks like so the future targets can be defined. Some examples are:

Table 20 Actual data information

Sites per company

Company	
Cargotec	14
Konecranes	20
Grand Total	**34**

Actual rents per company

Company	
Cargotec	€970,800
Konecranes	€1,111,600
Grand Total	**€2,082,400**

Square meters per company

Company	
Cargotec	10,800
Konecranes	13,500
Grand Total	**24,300**

Sites per usage

Use	
Office	12
Production	4
Service Unit	8
Warehouse	3
Workshop	7
Grand Total	**34**

Sites per usage per company

Use		
Office	6	6
Production	2	2
Service Unit	3	5
Warehouse	1	2
Workshop	2	5
Grand Total	**14**	**20**

Other possible elements:

- Sites per country / region
- Rents per region
- QSM per region
- Use per region

The idea of these tables is to show the most significant amount of information on the first page in a compiled way. By offering each company's figures, top management will have the correct background for relating the future strategies and savings. Variables like company, use, rents, square meters, regions and so on can depend on the focus of the synergy strategy. An essential element to communicating the correct information is using graphs and charts so the main stakeholders of the integration can immediately identify each figure's impact. Pie and bar charts were prioritised for the CT/KC fusion since they conveniently show both portfolios and the synergy strategy. For actual data of our studied case, we can use the following graphs:

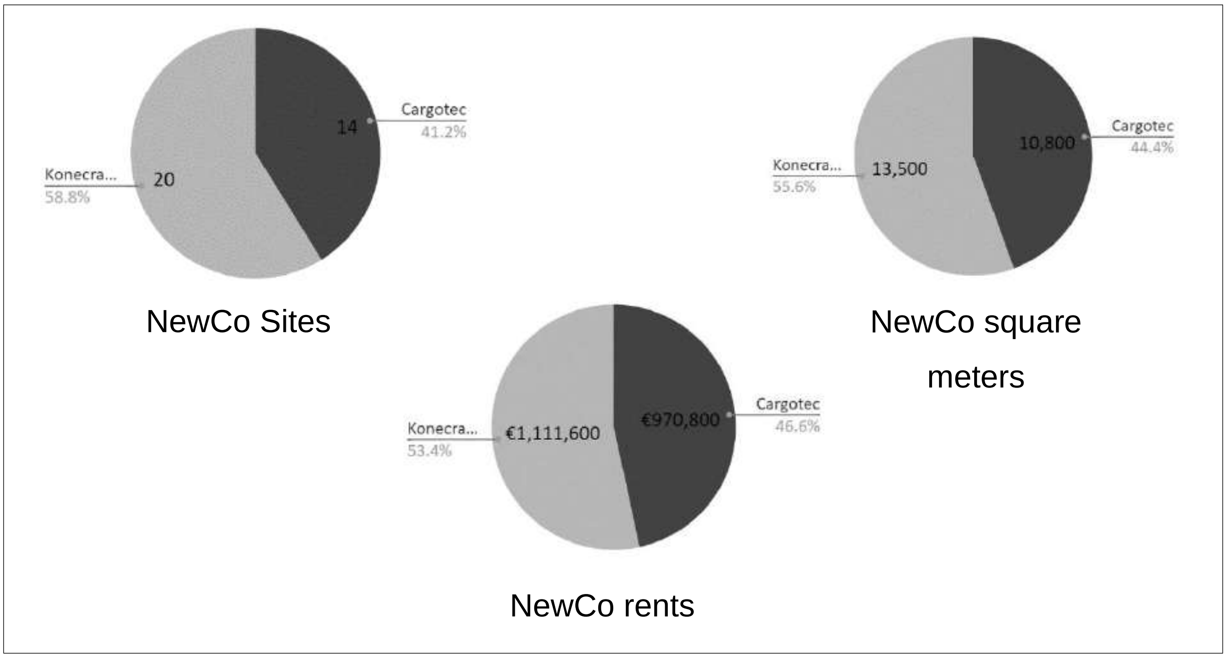

Figure 30 Graphs for actual data

Figure 30 demonstrates that even if Konecranes has significantly more sites inside the fusion, the impact is more balanced when the rents and square meters are analysed. A similar analysis can be done with the usage of the sites. In Figure 31 we can observe that the amount of offices is quite comparable among both companies. Nevertheless, Konecranes has much more service units and workshops. This can be reflected in the strategy definition since office strategies are low risk. However, a plan's services units and workshops are considered medium/high-risk elements.

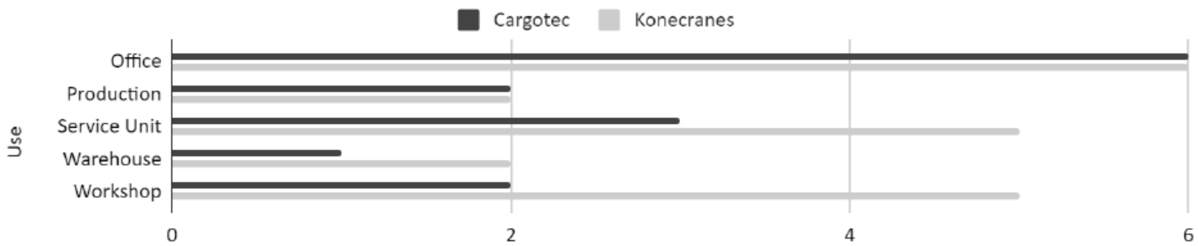

Figure 31 Use of sites per company

2. Synergy strategy figures

After the CRE integration team has completed the analysis and the internal reviews are finalized, the plan results should also be included in a summary file. Like this, the integration figures and final numbers can be reviewed and approved by top management. In addition, this will be a practical way to show all the stakeholders the real estate plan for the M&A. In the same way as the actual data. The numbers should be fixed understandably and practically, only highlighting the critical information. The summary can vary according to the stakeholders that will review the file. Nevertheless, the savings and timing will have to be present.

Table 21 Strategy summary

Synergies for sites

Synergy	
1 (colocations)	17
2 (efficiency)	2
3 (benchmarking)	8
4 (small offices)	3
5 (no changes)	4
Grand Total	**34**

Savings per strategy

Synergy	
1 (colocations)	€924,400
2 (efficiency)	€32,760
3 (benchmarking)	€63,960
4 (small offices)	€140,200
5 (no changes)	€0
Grand Total	**€1,161,320**

Probability of synergies

Synergy	30%	50%	80%	
1 (colocations)	5	4	8	17
2 (efficiency)			2	2
3 (benchmarking)			8	8
4 (small offices)			3	3
Grand Total	**3**	**3**	**18**	**30**

Savings per probability

Synergy	30%	50%	80%	**Total**
1	€222,400	€78,000	€624,000	**€924,400**
2			€32,760	**€32,760**
3			€63,960	**€63,960**
4			€140,200	**€140,200**
Total	**€222,400**	**€78,000**	**€860,920**	**€1,161,320**

Savings with risk factor

Synergy	30%	50%	80%	**Grand Total**
1	€66,720	€39,000	€499,200	**€604,920**
2			€26,208	**€26,208**
3			€51,168	**€51,168**
4			€112,160	**€112,160**
Grand Total	€66,720	€39,000	€688,736	**€794,456**

Savings per year with risk factor

Synergy	Year 1	Year 2	Year 3	Grand Total
1	€413,400	€191,520		€604,920
2			€26,208	€26,208
3	€24,960	€11,232	€14,976	€51,168
4	€39,520		€72,640	€112,160
Grand Total	€477,880	€202,752	€113,824	**€794,456**

In addition to the figures reported in summary, the order of the presented data is significant. As shown in Table 21, the number of synergies and potential savings are delivered. Then, low, medium or high-risk synergies are represented in saving reports. Last, it is recommended to show the distribution of the savings through time. Following the actual data section format, pie charts and bar graphs are recommended to display the information in this section. Some examples are:

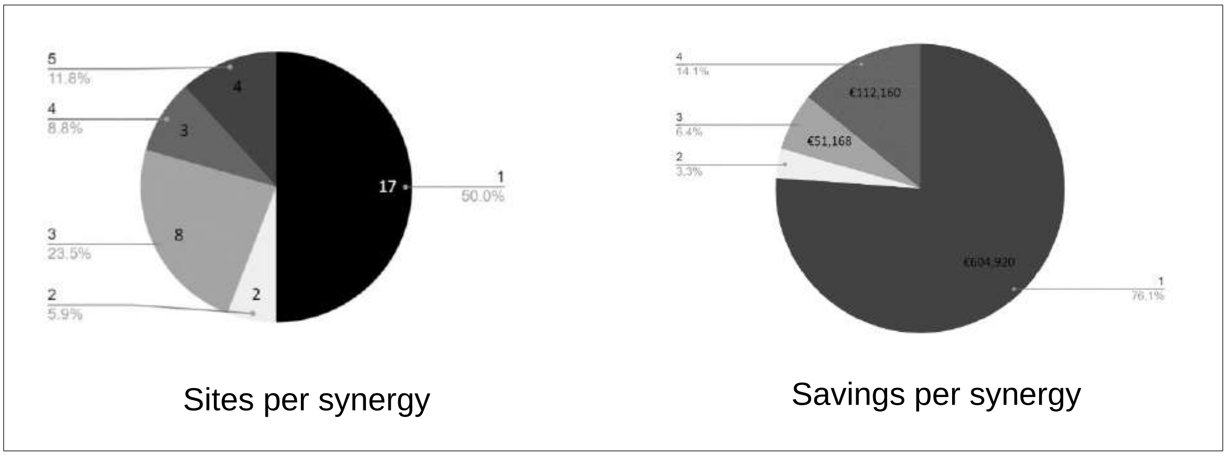

Figure 32 Pie charts for savings

These graphs demonstrate that seventeen out of thirty sites involved in the synergies will be part of a colocation strategy, which means that 50% of the focus will be related to this method. In addition, for this integration strategy, more than 75% of the savings are for colocations. The CRE integration team will need to prioritize the plans for colocations and dedicate 75% of their time to the integration planning development. Like that, the CRE team will ensure that the maximum savings will be reached in the promised time.

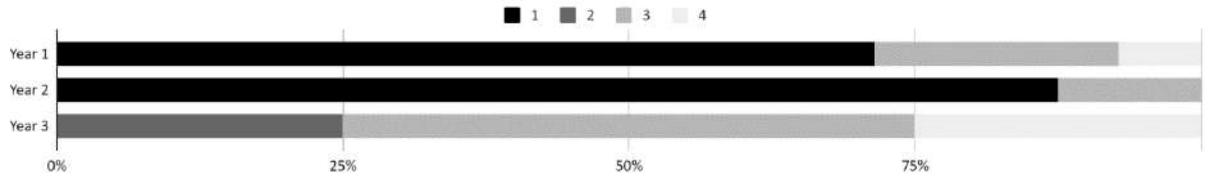

Figure 33 Percentage of savings per year

Figures 33 & 34 will help the integration team understand who will be the primary driver of the savings each year. Depending on the saving percentage and the percentage of strategies that will happen each year, the integration team will understand the impact of a plan, either if it is happening or not. For example, the closures will represent more than 60% of the sites to modify in the third year. Nevertheless, from the savings point of view, accomplishing all the planned closures will only represent 25% of the total proposed savings.

Figure 34 Percentage of synergies per year

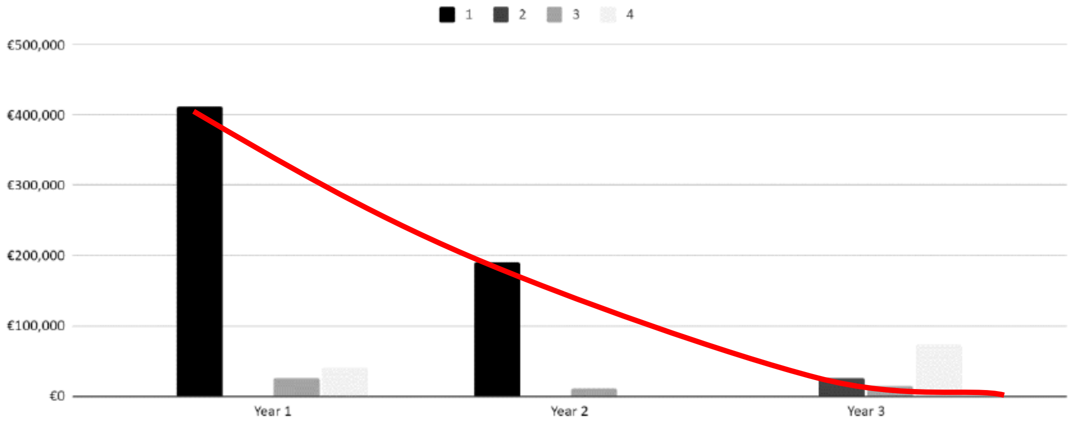

Figure 35 Distribution of savings

After analyzing the savings distribution, we can observe that the amount of work right after DayOne will be heavy. This means that it is recommended to hire additional in-house or outsourced resources. This analysis is excellent since it will give a general perspective of the workload and how the management area of the CRE integration team should promise the savings. This savings reporting is linked directly to creating business cases and their approval. After the business cases are approved, including the detailed analysis of the initial investment and needed resources, the CRE integration team will need to approach the local team and negotiate with the local project management team. Sometimes, a project is not required, and only some modifications to the existing lease agreement are more than enough. Even for these cases, legal and financial resources will be needed in addition to internal CRE members to own each project and have their own KPIs to accomplish the integration strategy.

6. Conclusion

CRE is a corporate-level area generally found in a global company whose central core is not the real estate business. It is the “value and success-oriented acquisition, handling and disposal of properties underuse or possession of corporations” (Glatte, 2020). Since it can cover high-level tasks, like asset approval and disposal, until operational activities like facility management, their local and top management business understanding can add significant savings to a company.

Similarly, but much more drastically, M&As' primary objective is to add value and/or offer savings to a company's future strategy. When two companies merge, their individual qualities will work together, and weaknesses will be minimized. However, an M&A requires a detailed plan and several resources to dedicate their time to understand the benefits and define the strategies to get the best of it. A merger is divided into three main stages. Preliminary studies to understand the numbers of the companies separately and the initial scenario of getting together determine the first one, ending with *GameDay* when the M&A is announced. Then the integration team enters the game. This team is formed by critical stakeholders that understand each business in deep. Here is when the real estate team enters the game. Their role is to understand the actual asset value and how it will behave throughout the M&A.

The CRE organization and functions can vary from company to company. Nevertheless, the position of this area in an M&A is pretty similar from M&A to M&A. They need to collect all the portfolio information, translate it to the same registration system and analyse it together. The CRE team needs to be involved in the early stages of the M&A to achieve immense savings. Another factor that will affect the integration plan is the type of CRE in each company. As reviewed in chapter 2.3, companies can either have the CRE team in-house or outsourced, centralized or located on every site. For an M&A, as we have seen in chapter 5, a centralized CRE is optimal since they have a deep knowledge of the assets and their use and management and have continuous communication with the local business. The rest of the types will also bring the needed information and can support the M&A. Nevertheless, they will require more time and resources than if they were centralized CRE.

The strategy suggested in this thesis was executed during the merger's CT/KC integration planning. In this merger, the objective of the integration plan was to have a clear path to follow for the next merger phase. This second phase will start after *Day-One*, planned for July 1st, 2022. First, the CRE team determined the team members and collected all the data. Following that integration plan as a successful example, the recommended elements of that data are:

1. Site ID or Internal name
2. Ownership: leased, owned or serviced
3. Address & Zipcode
4. City
5. Country
6. Region: EMEA, APAC or AMER
7. Main use/type: Office, production, warehouse, workshop, service unit or retail
8. Square meters
9. Headcount
10. Lease terms: fixed or rolling
11. Annual rent
12. Main site contact

With this data, the integration plan can start and the synergies proposed. As we have observed in the last chapter, the main objective of the suggested integration plan is to obtain savings by eliminating excess space. Five strategies must be applied (colocation, space efficiency, benchmarking, small office closure or no change), and all the sites must be assigned to one. Resources dedicated and approval plans will vary depending on the company´s size. However, deliverables and schedules will depend on the main integration team objective. The CRE team needs to adapt to the general M&A plan. The initial output of the suggested strategy will be business cases that will show a tactic to achieve the desired savings. While developing the desktop case study in this thesis, we have observed that the process will require deep knowledge of each site's local requirements so each business case can be realistic. Even if the strategy described only uses numbers offered by the lease agreement/ownership title, the tangible factor is added when the risk factor is summed.

Despite the internal resources for the CRE integration planning team, adequate tools should also analyze and included in the equation. The suggested strategy uses Google tools such as Google Sheets and Google Slides. These applications offer the needed cells and formulas to do the required studies and support Google Maps (so distances and visual location analysis in maps can be done). I think Google Platform-tools have two essential qualities that other applications (like Microsoft) do not. The first is the possibility of executing essential programming functions inside the tools without complex steps or deep programming knowledge. The second is that the drive function facilitates the complete team's collaboration in real-time. Both elements are essential during an M&A since they represent time and effort saving without the risk of mixing not updated files or old data.

For the desktop case study done in the thesis, we took 34 sites from Finnland. Addresses were real sites from Cargotec and Konecranes companies. However, the rest of the data is information randomized and used only to study the strategy. We can conclude that the desktop study defined a strategy for local managers to have 38% savings in actual estate-related expenses in three years. Eleven sites will be closed, representing 34% of the total studies portfolio. 32 out of 34 sites are included in a business case, and a reduction of more than 16,000 sqm can be achieved.

Remember that the outcomes of the strategy described in this thesis are just part of the integration plan. Its execution and success will depend on each company's top and local management that decides how, when and who will apply it. Even if the strategy gives all the basis and arguments to dedicate resources and time to execute the business cases, the method can severely fail if the CRE team does not fully understand the exact and specific local business needs. In addition, communication and proactiveness with the correct business partners can increase benefits (not only merger-related). Even if the method defines a risk percentage to report the savings, CRE managers must look forward to additional opportunities if a business case is rejected. In the case a business case is denied, another synergy strategy can be proposed for the same site/sites. Efficiency and boldness are qualities that the CRE manager will need to develop to achieve the best results of an M&A.

7. Summary

The Corporate Real Estate (CRE) area is inside the centralised team that takes care of the most critical decisions. Their main functions are related to assets, buildings and parcels where the company develops its main core business. It began in feudalism when the king had the record of all his possessions (Kofi Gavu, 2015). However, it is considered a relatively new area compared to others like finance or human resources. The first time this terminology appeared in a book was in 1983 when Zeckhauser and Silverman stated that many corporate assets (from 25% to 41%) are related to property investment. From a real estate point of view, there are three types of companies. 1)Invest properties, 2)self-used properties & 3) ancillary services. Each of them has its purpose, goals and concepts. However, their tasks can be pretty similar. Portfolio management, valuation & financial management, investment management, facility management and support activities (Glatte, 2020). The CRE area has three types of measurements: 1)performance (procurement, inventory, production and sales), 2) financial (liquidity, investing and financing) & 3)success (turnover, earning and profitability). Depending on the central core business of each company, the CRE will define its targets and goals.

The CRE can be centralized, decentralized, external or hybrid, focusing on functions, geographical distribution, processes, and customers. In addition, top management must determine the desired type according to the business needs, short-term goals, and strategies. (RICS, Parliament Square, 2018). In addition, globalisation is a crucial element to take into account nowadays. Corporate managers need to understand regional laws and regulations to determine a global strategy; however, local cultural practices will influence how this strategy will be achieved (Harvey, Too, & Too, 2010). Because of economic liberalisation, all enterprises can directly compete with any other similar worldwide. The hypercompetitive environment has pushed companies to adapt to structures that work globally. One economical solution to collaborate with globalisation is redefining the corporate structure, which can occur at a local, regional or international level. There are five corporate restructuring strategies: 1) Mergers & acquisitions, 2)reverse mergers, 3)divestiture, d) joint venture & 5)strategic alliance. (Mendes de Araújo, Silva, Sá e Silva, & Pereira, 2018)

A merger is a combination of several enterprises where each element has the same stake in the NewCo (we will refer to this as the result of an M&A). One example is the equal fusion between Chrysler & Diamler in 1998. After ten years of pushing the merger together, “cultural mismatches” of the American and german ways of working exploded, miss selling Chrystler’s shares (Snow, 2011). To avoid a merger failure, advisory and consulting companies like PwC, Deloitte, KPMG, EY or BCG sell M&A strategies and analysis. Value creation is the final objective of restructuring an organisation. This is created by combining elements of involved parties in an M&A to achieve financial goals, including mission, vision and resources. To achieve this value creation, synergies should be completed. “Focus on value creation, not just in integration” (Christensen, Richard, Curtis, & Waldeck, 2011).

CRE is a critical team when developing an M&A integration plan since this corporate restructuring strategy has been developing and increasing since the first half of 2020 and is the third expense on an enterprise price statement. From another perspective, adapting to the new way of working introduced by the covid-19 pandemic is a task owned by the CRE team. It will improve the space quality where employees develop their everyday tasks, and space efficiency can be improved. According to Kelsi Maree Borland, a journalist focused on the commercial real estate industry, policies to work from home will turn the market in two directions. Either company will want to expand their real estate portfolio o decrease it (Borland, 2022)

The most critical element for an M&A to succeed is having a complete and detailed integration plan to execute the needed tasks. The integration team should be involved from the beginning in all the areas of both companies, having a representative that will include just the required resources in the integration team. The approach is similar to a project, so a defined timeline, budget, and resource definition have been necessary since GameDay. The integration plan should develop the following documents:

1) Workflow and fundamental operating rules

2) Synergies – quick hits and low-hanging fruits

3) Initial systems and facilities requirements

4) Transition cost estimate & timeline

5) Issues and recommendations

The CRE team needs to develop all the possible synergies related to physical assets and facilities during the integration planning. After gathering all the information required from both companies´ portfolios, the CRE integration team needs to define a timeline to give all the possible business cases, including RE synergies. In addition, a detailed approval process is necessary, so the business cases go to the correct managers and become part of specific stakeholders' targets. All sites should be included in one plan (colocation, space efficiency, benchmarking, closure or no change) and assigned to a business case. Depending on the compound business needs of the NewCo, CRE managers will define if the sites should be combined, reduced, closed, benchmarked or leave it as it is. The CRE manager will assign the synergies depending on their location, size, primary use, and the number of employees. At the end of the site–data analysis, the strategy will give results as possible savings over a period of time.

This thesis used a desktop case study with thirty-four sites from Finland. Addresses were real sites from Cargotec and Konecranes companies. Still, the rest of the data was created only for representative purposes of this thesis. The desktop study shows a strategy for local managers to have high savings in related real estate expenses three years after the merger. 32 out of 34 sites are included in a business case, and a severe reduction of sqm can be achieved. Remember that the outcomes of the strategy described in this thesis are just part of the integration plan. Its execution and success will depend on each company's top and local management that decides how, when and who will apply it. Even if the strategy gives all the basis and arguments to dedicate resources and time to execute the business cases, the method can severely fail if the CRE team does not fully understand the exact and specific local business needs.

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Declaration of Authorship

I hereby declare that the attached master's thesis was completed independently and without the prohibited assistance of third parties, and that no sources or assistance were used other than those listed. All passages whose content or wording originates from another publication have been marked as such. Neither this thesis nor any variant of it has previously been submitted to an examining authority or published.

Berlin, 05. July 2022

Location, Date

Signature of the student

Appendix

Appendix A – Sample of the table to report transition cost estimate.

Functional Areas One-Time Formation Cost Estimate	Responsible Person	Cost ($000)	Basis for Estimate
Office Setup			
Remodeling and build out			
Furniture			
Rewiring, phone, systems			
Office phone and computer reconfigurations			
Stationery and supplies			
Severance Expenses			
Plant personnel			
Company A headquarters personnel			
Company B headquarters personnel			
Relocation Expenses			
Plant personnel			
Company A headquarters personnel			
Company B headquarters personnel			
Plant Expenses			
Data Systems setup and connectivity			
Emergency communications system setup			
Re-permitting			
Legal Expenses			
Registrations to do business			
Copyright and trademark registrations			
Marketing and Sales			
Packaging and labeling modifications			
Customer notifications			
Purchasing and Supply Chain			
Vendor notifications			
Develop and print purchasing policy manuals			
Company A POs with new terms and conditions			

Functional Areas One-Time Formation Cost Estimate	Responsible Person	Cost ($000)	Basis for Estimate
Finance Consolidated reporting systems setup Cash collection system setup Payables system setup			
Compensation and Benefits Consultant assistance			
Corporate Structuring; **Start-up and Integration Planning** Consultant assistance			
Total			

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Resource B: Integration Planning Template – Transition cost estimate, page 358

Appendix B – Transition timeline example

ID	Task Name	Start	Finish	Percentage Complete	J J A S O N D / 2004 J F M
1	**HSE**	Wed 7/1/03	Fri 6/30/05	32%	
2	**Purchased Safety Services**	Wed 7/1/03	Fri 6/30/05	28%	
3	Complete detailed analysis and prioritization of current	Wed 7/1/03	Fri 8/14/03	100%	100%
4	Generate updated synergy target based on above	Wed 7/1/03	Tue 9/1/03	40%	40%
5	Consolidate purchases identified in target—as contracts permit	Wed 7/1/03	Fri 6/30/05	25%	
6	Provide functional support to achieve target–ongoing	Wed 7/1/03	Fri 6/30/05	25%	
7	**Corporate Safety Consolidation**	Wed 7/1/03	Mon 2/1/04	41%	41%
8	Develop organization plan and headcount recommendation	Wed 7/1/03	Tue 9/1/03	100%	100%
9	Review above with appropriate officers	Tue 9/15/03	Tue 9/15/03	100%	100%
10	Modify and finalize plan as necessary	Thur 10/1/03	Thur 10/1/03	85%	85%
11	Develop consolidated safety management philosophy end	Thur 10/1/03	Mon 2/1/03	10%	10%
12	Implement	Wed 7/1/03	Wed 7/1/03	50%	50%

ID	Task Name	Start	Finish	Percentage Complete	J J A S O N D / 2004 J F M
13	**Regional Safety Consolidation**	Wed 7/1/03	Tue 9/1/03	60%	60%
14	Confirm organization plan and headcount recommendation	Wed 7/1/03	Tue 9/1/03	20%	20%
15	**Gain Approval and Implement**	Wed 7/1/03	Tue 9/1/03	60%	60%
16	Corporate safety consolidation in place	Wed 7/1/03	Tue 9/1/03	100%	100%
17	Common philosophies adopted	Wed 7/1/03	Tue 9/1/03	30%	30%
18	Current synergies achieved	Wed 7/1/03	Tue 9/1/03	50%	50%
19	**Regional Plant Safety Consolidation**	Wed 7/1/03	Tue 9/1/03	10%	10%
20	Confirm organization plan and headcount recommendation	Wed 7/1/03	Tue 9/1/03	10%	10%
21	Gain approval and implement dependent on potential	Wed 7/1/03	Tue 9/1/03	10%	10%
22	**Other Areas Nonquantified**	Wed 7/1/03	Thur 12/31/03	50%	50%
23	Medical	Wed 7/1/03	Wed 7/1/03	40%	40%
24	Product safety	Fri 8/14/03	Thur 12/31/03	50%	50%

Galpin, T. J. (2018). The Complete Guide to Mergers and Acquisitions: Process Tools to Support M&a Integration at Every Level.

Resource B: Integration Planning Template – Transition timeline example, page 387