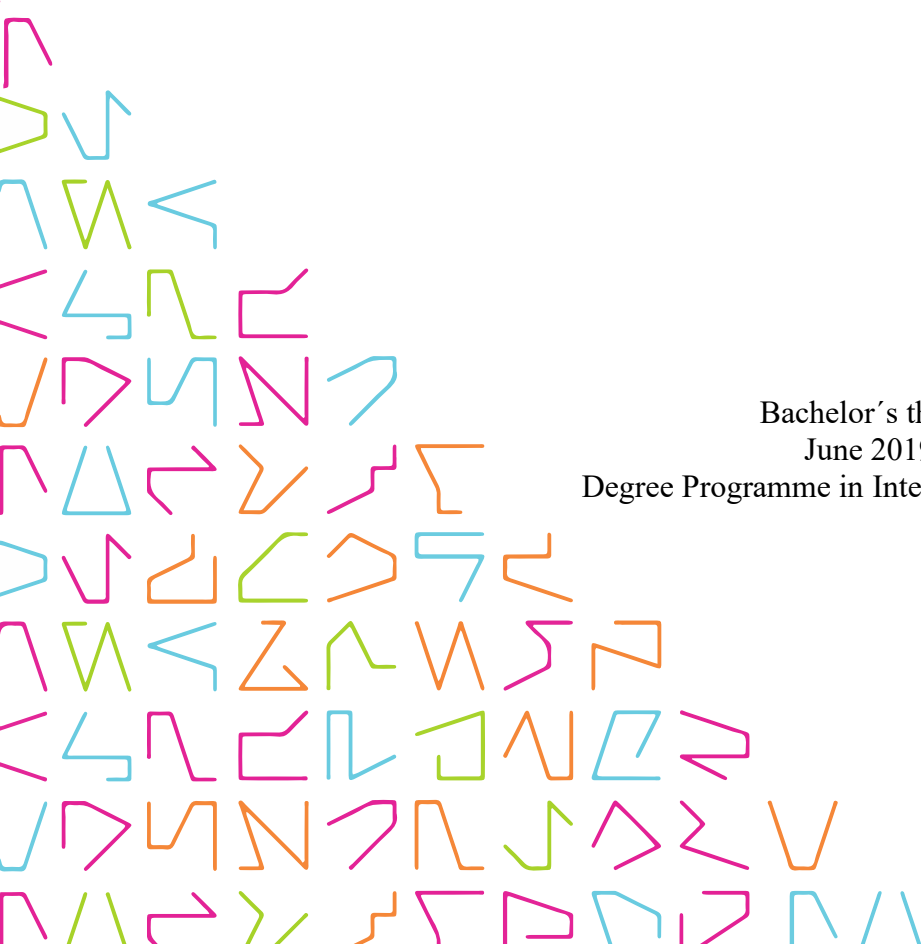


## **Bachelor's thesis**

# Roadmap for Productization of Insight Reporting Pro 2.0 & Value Sales

Julius Salo

Bachelor's thesis  
June 2019  
Degree Programme in International Business



## **ABSTRACT**

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Developing the sales process regarding digital products along with a roadmap for the Insight Reporting Pro 2.0 product  
Research for Glaston Finland Oy

Bachelor's thesis – pages 45, appendices 2 - pages 47  
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This thesis was commissioned by Glaston Finland Oy for the research and development of value sales for digital products and creating a roadmap for Insight Reporting Pro 2.0. The commissioners of this thesis are Sami Kelin (Director of Architectural Business Unit - Glaston) and Petteri Vilen (Senior lecturer from the university of TAMK).

The main purpose of this thesis is to develop the digital product called Insight reporting pro 2.0 and have a roadmap for the future. Internal marketing to the sales department as well as the sales process development together with value sales will be essential. The topic addresses the importance of recurring payments and value sales for digital products, focusing on the reporting tool.

Through the research of online sources, academic literature and the topic issued by the commissioner, a framework was created based on an extensive analysis of already existing data to research a potential for digital products. The results gave an understanding of the current perception of the product in different markets worldwide and measures which need to be taken in order to succeed.

The analysis of the market and current customers along with their own competing products discovered the underlying issue for market-entry in some parts of the world. For future development of the product, partnerships were created with a few customers to gain more valuable feedback.

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Key words: Value sales, Digital Products, Sales Tool, Insight Reporting Pro

## CONTENTS

<b>1</b>	<b>INTRODUCTION</b> .....	<b>5</b>
1.1.	<b>Glaston Finland Oy</b> .....	<b>6</b>
1.2.	<b>Case Background</b> .....	<b>7</b>
<b>2</b>	<b>Digitalization in Glaston</b> .....	<b>9</b>
2.1.	<b>Insight Reporting</b> .....	<b>12</b>
2.2.	<b>Insight Reporting Pro</b> .....	<b>15</b>
2.3.	<b>Glaston Siru</b> .....	<b>18</b>
2.4.	<b>MyGlaston</b> .....	<b>19</b>
<b>3</b>	<b>VALUE SALES</b> .....	<b>22</b>
3.1.	<b>Traditional sales process</b> .....	<b>22</b>
	Figure 1.....	<b>23</b>
3.2.	<b>Value-added selling</b> .....	<b>24</b>
3.2.1	Value sales process .....	<b>25</b>
3.2.2	References in value sales .....	<b>27</b>
3.2.3	Presenting the value .....	<b>29</b>
3.2.4	Value-added selling & Insight Reporting Pro .....	<b>30</b>
<b>4</b>	<b>SUBSCRIPTION-BASED MODEL</b> .....	<b>31</b>
4.1.	<b>Subscription-based model and Insight Reporting Pro</b> .....	<b>32</b>
4.2.	<b>Subscription-based strategies</b> .....	<b>32</b>
4.3.	<b>Traditional vs subscription based model</b> .....	<b>33</b>
4.4.	<b>Padre operating model</b> .....	<b>35</b>
4.4.1	Positioning.....	<b>36</b>
4.4.2	Acquire .....	<b>36</b>
4.4.3	Deploy .....	<b>37</b>
4.4.4	Run .....	<b>37</b>
4.4.5	Expand.....	<b>37</b>
<b>5</b>	<b>ROADMAP FOR INSIGHT REPORTING PRO 2.0</b> .....	<b>39</b>
5.1.	<b>Ongoing development</b> .....	<b>39</b>
5.2.	<b>Next steps</b> .....	<b>41</b>
<b>6</b>	<b>CONCLUSION</b> .....	<b>43</b>
<b>7</b>	<b>REFERENCES</b> .....	<b>45</b>
<b>8</b>	<b>APPENDICES</b> .....	<b>46</b>

**GLOSSARY**

Insight Reporting Pro	Online reporting platform for production development
MyGlaston	One-point access platform
NPV	Net present value
Glaston Siru	Mobile application for counting cullets
IOT	Internet of things
R&D	Research and development
EMEA	Europe, Middle East and Africa
NMS	New machines sales
CRM	Customer relationship management
GPD	Glass Performance Days
ARR	Annual recurring revenue
CAPEX	Capital expenditure

## 1 INTRODUCTION

Glaston Oyj Abp holds a market leading position in the glass heat treatment industry, supplying high-end flat tempering, flat laminating and bending technologies. This can be considered as a direct result of investing in product development and to the high quality of the products. Glaston holds specifically the highest market share amongst heat treatment technology providers in the high-end segment. Further developing the glass heat treatment process and the technologies surrounding it is becoming ever more crucial in current times with digital leaps that have taken place recently and in the future. The Insight product family is a crucial part of this development looking towards the future of the glass industry, as the market is increasingly demanding ways to improve their processes and eventually have a fully automated tempering line.

Gathering data from customers' machines plays a big role for Glaston internally to be able to assist clients as well as develop technologies. Insight Reporting Pro is an online platform designed specifically for this purpose as it can display production data gathered directly from the customers machines into a cloud-based system. The Insight Reporting Pro is a fairly new product for Glaston and is under constant development as software-based programs generally are. The author of this thesis is responsible for the research and development of said product as well as its marketing both internally and externally.

The commissioner of this thesis is Glaston Finland Oy's director of the architectural business unit Sami Kelin. The main goal of this thesis is to demonstrate to the customer the value of digital products offered and create a roadmap for the future development. Currently some customers may be a little skeptic about the value of Insight Reporting Pro as it does not add direct value but can help decrease costs effectively by improving the way customers operate their machines. The thesis starts with the company's presentation as well as its core products, including the Insight product family. Research starts with determining the current state of the digital products both internally and in the market and evolves into how Glaston will be able to better market the value to their existing and potential clients. Digitalization will also be a key factor in this thesis.'

## 1.1. Glaston Finland Oy

Kyro company was originally founded in 1870. The history however of how Glaston became the company it is nowadays, begins in 1981, when Kyro company bought Tamglass (Glaston, 2019). Tamglass was known for their specialization in windshield bending and laminating lines. They released their first flat tempering line named the HTF in 1975 and continued to develop the technology. The company's name was changed to its current state, Glaston, in 2007 and in 2010 the new generation tempering lines, which they are famous for, were launched.

Glaston Finland Oy is a company, the core business of which is glass heat treatment technologies along with services which supplement the offered product portfolio. Glaston's customers consists of safety glass vendors worldwide, most of whom are in the architectural business sector. Glaston's organization can be divided into two main components which are the machines business, and the services business. The machines business unit is split up according to what sort of glass processing and business area is in question. Currently it is divided into the architectural and automotive business units. The author is currently working under the architectural business unit, which consists of flat tempering and flat laminating machines. Bending technologies fall under the automotive business unit, which is a much smaller portion of the market and Glaston's revenue.

Below are demonstrated Glaston's figures in numbers for the Q2 report from the year 2019, as to see what the current situation is like and where it will develop (Glaston, 2019).

### **Glaston in brief 2019:**

#### **April – June 2019**

- Orders received totaled EUR 44.5 (25.4) million.
- Net sales totaled EUR 58.4 (25.6) million.
- Comparable EBITA was EUR 3.6 (1.4) million, 6.2 (5.4)% of net sales.
- The operating result (EBIT) was EUR 0.4 (0.9) million, 4.3 (3.6)% of net sales.
- The comparable operating result (EBIT) was EUR 2.5 (0.9) million, 4.3 (3.6)% of net sales.
- Items affecting comparability totaled EUR -2.1 (0.0) million.
- Cash flow from business operations was EUR -5.4 (1.9) million.

From the figures above it is shown that there was an increase in net sales compared to the previous year, however this is due to the aforementioned purchase of the Bystronic company, and the figures shown represent the whole of Glaston Corporation. As the author of this thesis is writing this, Glaston Finland Oy is initiating co-operation negotiations in its Finnish units due to the weakening demand in heat treatment solutions, however it is stated that the outlook for the rest of the year shall remain unchanged. This is important to note regarding the topic of this thesis as with the current situation it is becoming increasingly more difficult to attain funding for the development of digital products, such as the XR, Insight Reporting Pro and MyGlaston. This is especially the case for the last product as it is with negative net present value. MyGlaston is distributed to all customers free of charge, but more on that later.

## 1.2. Case Background

The case given is provided by Glaston Finland Oy, located in Tampere. It belongs to the Glaston Corporation, which has subsidiaries around the world, for example in the Americas and China. Glaston Corporation also includes the recently purchased company of Bystronic. Bystronic glass will have no part in the commissioning of this thesis but will be a crucial part in the case given as it is planned to expand the digital products to Bystronic side as well. Bystronic Glass and Glaston are internationally recognized companies by the logo's in the image 1, and image 2.



Image 1. Bystronic logo



Image 2. Glaston logo

The purpose of this thesis in the bigger picture is to develop a roadmap for the upcoming product of Insight Reporting Pro 2.0, to turn around the negative NPV of the current product Insight Reporting Pro. This will allow for the continuation of development for Glaston's digital products as the goal is to have the products fund the research and development costs at the bare minimum, turning a profit after costs is of course the goal down the line.

The other aspect of this thesis is to study the payment structure of the digital product that is Insight Reporting Pro. In its current form the payments are done via monthly subscription-based fees, but as the product is still in its early phases and the pitching for the product may be difficult, it is imperative to study the approach to value sales.



## 2 Digitalization in Glaston

It has long been in the strategy releases published by Glaston Corporation to have increased levels of digitalization in products (Glaston, 2018). This is not only in reference to Internet of things products, but also towards the automatization of the heat treatment process. Internally the matter has been discussed frequently in the past years and the reality is starting to form sooner than later. The goal of the company is to have a fully automated tempering line by the year 2021, and steps have already been taken align the way for this becoming a reality. It is often compared to the self-driving vehicles, as steps are needed to take before releasing the final product, for example in cars you will find parking assistance and sensors to control your speed and detect approaching cars and lanes etc. The same can be said for tempering furnaces with the launch of software-based products such as Assistant Pro, which decreases the amount of work done by the furnace operators. This enables the furnace to select recipes based on the loadings provided using DLP sensors.

In today's business as mentioned in the previous paragraph, data and analytics are used more and more to increase the R&D as aspects of a company and to provide better products and services in the future. There is a certain level of transparency required from both Glaston and their customers as data collection is not always a given. This also depends strongly on the region of the world and the customers' standpoint in the industry. The willingness to give out for example production data may not be so simple for many customers, but it is essential to further drive the development of digital products. Insight Reporting Pro is such a product, which totally relies on the received furnace data. In Glaston sales agreements there is a clause, which enables us to mine the incoming data from the customer with their consent. This is not however always signed by the customer due to the unwillingness to give out sensitive information, as Glaston would own the data. If the customer comes around in the future, there is a separate agreement in place calls the data agreement, which allows Glaston to collect the customers data if it was previously not possible. More and more customers are coming back to this as they realize the potential growth and recognize that the future of the glass industry will rely on this in the future.

The data gathered for the Insight Reporting Pro product is viewed in a BI tool called PowerBI. This has all the data gathered and from there it is simplified to fit the customers' need as to not overwhelm them with data that they may not construe as necessary. In the

images below is the general overview of the machinery that Glaston has collected data from.

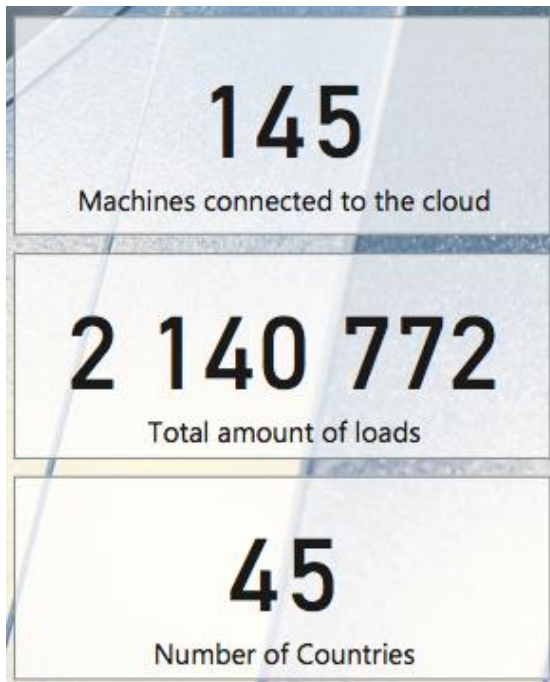


Image 3. Indicated number of machines connected to the cloud along with the total amount of loads processed with these machines.

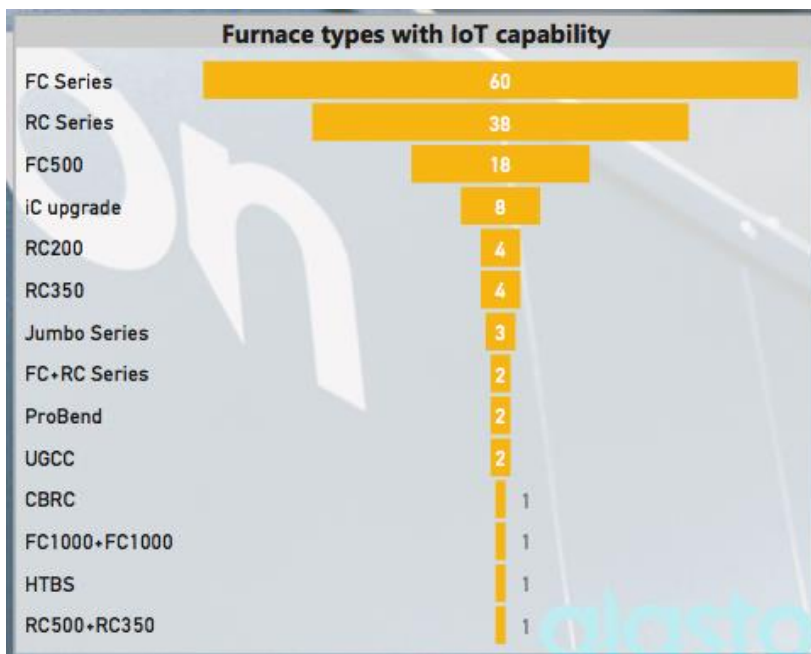


Image 4. Breakdown of different machine types connected to the cloud.

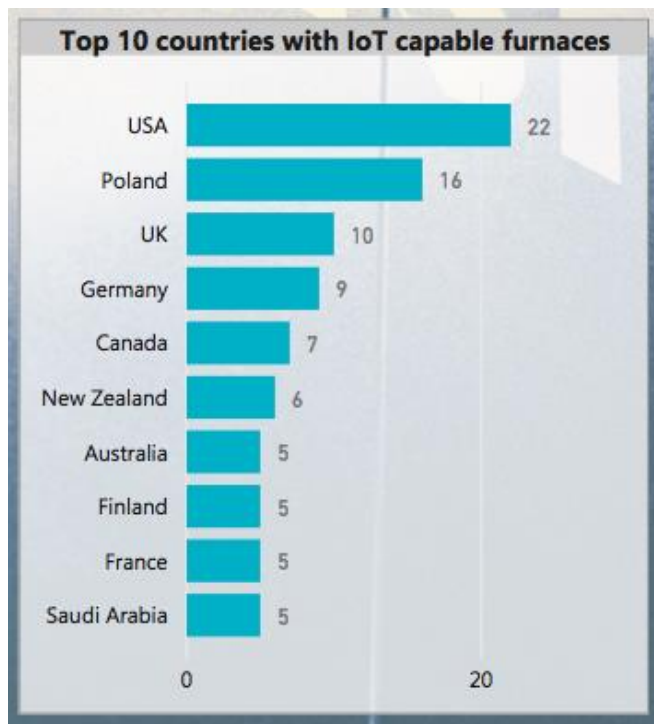


Image 5. Countries with machines connected to the cloud. From this image we are able to somewhat determine which countries are more open-minded towards IoT.

These images represent a crucial part of Glaston's digitalization efforts. Glaston has supplied machinery for a long period of time and the images do not represent the whole of Glaston's fleet worldwide, but those that are connected to the cloud. The United States of America is the country with the single most machines connected via our data gathering software, however the Europe, Middle East and Africa region is the region with most machines connected in total.

Image 4 provides the information of how many of each machine type are connected. The RC-, and FC-Series are the newest launches of machine technology and are most equipped with the capability for data gathering. The data gathering requires the capability to have Tosibox connection as well as iControl, so in some of the older machines Glaston lacks the connectivity due to the lack of these upgrades i.e. the RC200 and RC350 type machines.

Image 3 displays the total amount of furnaces connected with the total reaching 145 machines worldwide. The number of loads displayed means the number of batches that have been processed in one of Glaston's tempering furnaces. The data supplied is gathered from a time period of one year. Glaston's machines are truly spread worldwide as image 3 further displays the number of countries of connected machines, keeping in mind that not nearly all of Glaston's machines have yet been connected.

Glaston has aptly named this network style as the Glaston insight ecosystem. This means that our machines are connected, creating better process and service intelligence that lead directly to better profitability for ecosystem members. In practice this means being able to see what machines are doing whenever, advanced recipe libraries, advanced reporting that help in increasing factory efficiency and increased levels of machine intelligence. “Through Glaston Insight, excellence comes standard, in all Glaston machinery” is the quote that promotes these services (Glaston, 2018).

### 2.1. **Insight Reporting**

The development of Insight Reporting, which is a mobile application, began in late 2015 / early 2016. This application began the wave of IoT-based products for Glaston and was developed together with the help of customers and a third-party software developer. The idea for the mobile application that would be known as Insight Reporting had the idea to conveniently display the most crucial data to the customer, all available on their phone. The idea was not to have it construed as a means to monitor workers in the factory by viewing the production live, but to have it give data to the customer for them to see how efficiently they are actually running their furnace. The launch of the application came during the fall of 2016, but it had its skeptics. As previously mentioned in this thesis, the gathering of information is a sensitive subject around the world and this required a few pilot customers to launch. The mobile application was intended to be free of charge together with new machines sales.

The launch of Insight Reporting was a good idea, but there were some issues with the execution as application developer was running into trouble. The amount of data gathered was so immense that the mobile application could not properly handle it, leading to the collected data being false compared to the PowerBI data. These events sprung the idea for the development of a new product that would be called Insight Reporting Pro.

Insight Reporting offering:

- Real time data directly from machines
- Mobile application for live information and notifications
- Includes quality report (QMS) of all loads from your machine

### Reports – Fleet:

- Fleet shows the machines available in the Glaston Insight ecosystem
- Allows the selections of the machine’s customer wants to inspect and by pressing “analyze”, data is shown

The fleet reports enables the viewer to see what machines they have connected to the cloud system. Separate identification names can be given to the machines via MyGlaston portal to better indicate which machine is which on the factory layout. It is also convenient to have the ability to view the machinery data all together to get an overview picture of the production, or view them separately, giving the loadings of a single machine for example if there are open issues.

### Overview:

- Shows key data related to customers tempering line
- Produced tons
- Energy consumption
- Bed utilization rate (production efficiency)
- Errors
- Filtering by time period is available

The overview page can be construed as a summary page for the upcoming data. This page in the reporting system hold the most crucial data to be seen in a glimpse. All the categories displayed are key indicators for the customer to follow-up on their production. When thinking about costs, the most important ones would be bed utilization, which indicates how efficiently they use the full capacity of the machine, as well as the energy consumption.

### Throughput:

- Breakdown of energy consumption and glass output over time
- Filtered by glass type (Clear, Low-E)

This page in the Insight Reporting app demonstrates further the breakdown of a machine’s energy consumption. Clear and coated glass require different types of recipes to process

in the furnace and hence it is important to have them separated. The low-E coating typically requires longer heating time, thus consuming more energy.

Maintenance:

- List of maintenance issues divided into completed, current and upcoming tasks
- Maintenance tasks include date and a short description
- Errors

The maintenance page together with the error system are a very useful combination. It provides the customer with information regarding the maintenance of the machine, helping them avoid costly maintenance breaks and downtime in the factory. The errors displayed will help the customer recognize if there is something faulty in the machine, for example if it is signaling an overheating scanner, it would be reasonable to check that everything is truly in order.

Utilization:

- Shows the utilization of the machine
- Production (furnace is in production mode and there is glass in the furnace)
- Idle (furnace is in production mode, but there is no glass in the furnace)
- Error (furnace has been stopped by using emergency stop)
- Off (furnace is off or in hot store mode)

The utilization page or the production page dives deeper into the production of the furnace. The utilization rate describes how much of the machines capacity the customer is using, begging the question if there is something that could be done to improve efficiency. It also gives the machine states, to see how much downtime occurs.

Further requirements for data gathering compatibility:

- Powered by iControl
- TOSIBOX VPN device
- Agreement for data transfer is in place
- Thermal scanner for calculating produced tons

## 2.2. Insight Reporting Pro

The development of Insight Reporting Pro then began in the spring of the year 2017, with the same initial idea that was implemented into Insight Reporting. The difference this time around was to make it compatible with a browser, thus giving the potential to better process the information that was received, and have it accurately displayed. The target group for which this product would be sold is the higher management in the factory as well as the leadership in the office. The idea of a mobile application was good, but there is something that needs to be understood, which is the fact that the production of these furnaces are not truly necessary to monitor at a live state for the management level personnel. Operators are with the machines at all times and have the understanding of how to run the tempering line. The data would provide critical information to management and from there on out they could analyze the data and make changes to their production accordingly if needed.

The development of Insight Reporting Pro required the contribution of a few partner customers in order to create an exemplary platform and learn from the previous mistakes regarding the mobile version. The author of this thesis is currently also involved with a few customers with the purpose of further developing the Insight Reporting Pro platform and better suit customer needs. It is crucial to listen to customers' needs, as there is only so much we can decide internally as to what is necessary for them. There is an issue however to this as the platform is a cloud-based software meaning that it is not customizable to individual customers' needs, hence gathering feedback from a small group of customers and taking on the most relevant issues they bring up is the best solution in moving forward with the development.

The Insight Reporting Pro product was finally officially launched in the Glasstech fair in September 2019, having a positive response from people attending the fair. Glasstech is the biggest trade show in the glass industry and gathers people around the world to Dusseldorf, Germany where it is held. Since the launch the author of this thesis has gained responsibility for the further development and oversight of Insight Reporting Pro and has established new partnerships with a few select customers around the world who have shown keen interest in the product and are willing to be a part of the development process. The product is developed together with partner companies working on developing the coding of the program, as Glaston does not have the internal resources for this. In the recent past Glaston has switched the companies providing this service causing a

momentary halt in the development, as the information and knowledge is being transferred from one entity to another.

Insight Reporting Pro differs from its predecessor in many ways and below are listed the key attributes it provides. This being said the mobile version is still being used and given out with new purchases, however changes will be made to this in the future.

Insight Reporting Pro:

- Develop and benchmark your production
- Verify development actions
- Follow production trends

Very similar to the Insight Reporting app, the Insight Reporting Pro system was developed to better the customers' production. This browser-based platform has better capacity than the application and better visualizations, thus the input is a little bit different.

Report types:

- Overview
- Production
- Energy consumption
- Machine State
- Quality

Overview:

- Machine state summary
- Amount of loads by glass type (Clear / Low-E)
- Number of loads by glass thickness (Clear / Low-E)
- Filtering options include
  - Time
  - Machine
  - Glass type
  - Mode (heat strengthening / tempering)
  - Operator



Firstly, the overview page gives the viewer a brief insight into their production, along with multiple filtering options to view the data the way the customer wishes. The filtering options are important for the customer to not get distorted view on their production as clear glasses are more common than coated glasses, and the deviation between the thickness of the glass can vary quite a bit.

Production:

- Average bed utilization %
- Average bed utilization % by thickness
- Produced square meters by date
- Number of loads by date

Production page offers more in-depth views to the overview page regarding the production data, which is not visible as in depth in the application. Average bed utilization refers to the percentage of the loading table that is being used for optimizing efficiency. There are however many intricacies to tempering glass, and it may not always be wise to operate at maximum capacity.

Energy consumption:

- Average energy consumption (kWh) per sqm by glass thickness
- Total energy consumption by date

This will be a crucial page, especially when the future updates discussed towards the end of this thesis are brought into production. It displays the average energy consumption of the machine per square meter and sorted by thickness. It is important to display the data per sqm as it will become clear if producing with low bed utilization, that the energy consumption will be high.

Machine state:

- Machine state summary
- Production hours
- Production efficiency
- Availability of machine
- Machine state by date

Like the utilization page in the application, this page displays the machines run time. It takes into account the hours of production and time that the machine has spent in idle mode, maintenance mode or completely off.

Quality:

- Average iLook quality values by
  - Machine / thickness
- Reports leading and trailing edge kink and roller wave
- Distribution of iLook values
  - Displays how much variation there is in quality production

Quality data is accessible to those customers that have purchased the iLook quality measurement system. It displays the quality data e.g. roller wave and edge lift values from the produced glass, and with the sorting system the customer will be able to see any difficulties in producing a certain glass type.

The requirements for data gathering remain the same as in Insight Reporting, in addition to the requirement of iLook for quality values. iLook is a quality measurement device sold as an optional feature to Glaston machines, which enables the user to see quality values from the glass such as the dip in the glass edges as well as the roller wave appearing in the glass due to the rollers in the tempering line.

### 2.3. **Glaston Siru**

In order to best explain the need and creation of Glaston's latest mobile application it is important to know a few things about the standards in the tempered glass industry. Like many other industries for example construction, there are certain safety and quality standards that must be reached. The glass industry is no different in this matter and this is why the Glaston Siru application came to be. The glass industry European standards define that a tempered glass, when broken from the edge must have a minimum of 40 fragments in a five by five-centimeter area, which is to be calculated from the area of the glass with the least number of fragments. Until recently these fragmentation tests and the counting of the culetts was done manually and was very time consuming for the operators. This sparked the idea to create an application, which by using deep convolutional neural networks to teach the recognition of glass culetts, is able to calculate the specific amount

of cullets in the 5 by 5-centimeter area as set in the standard, by taking an image with the app.

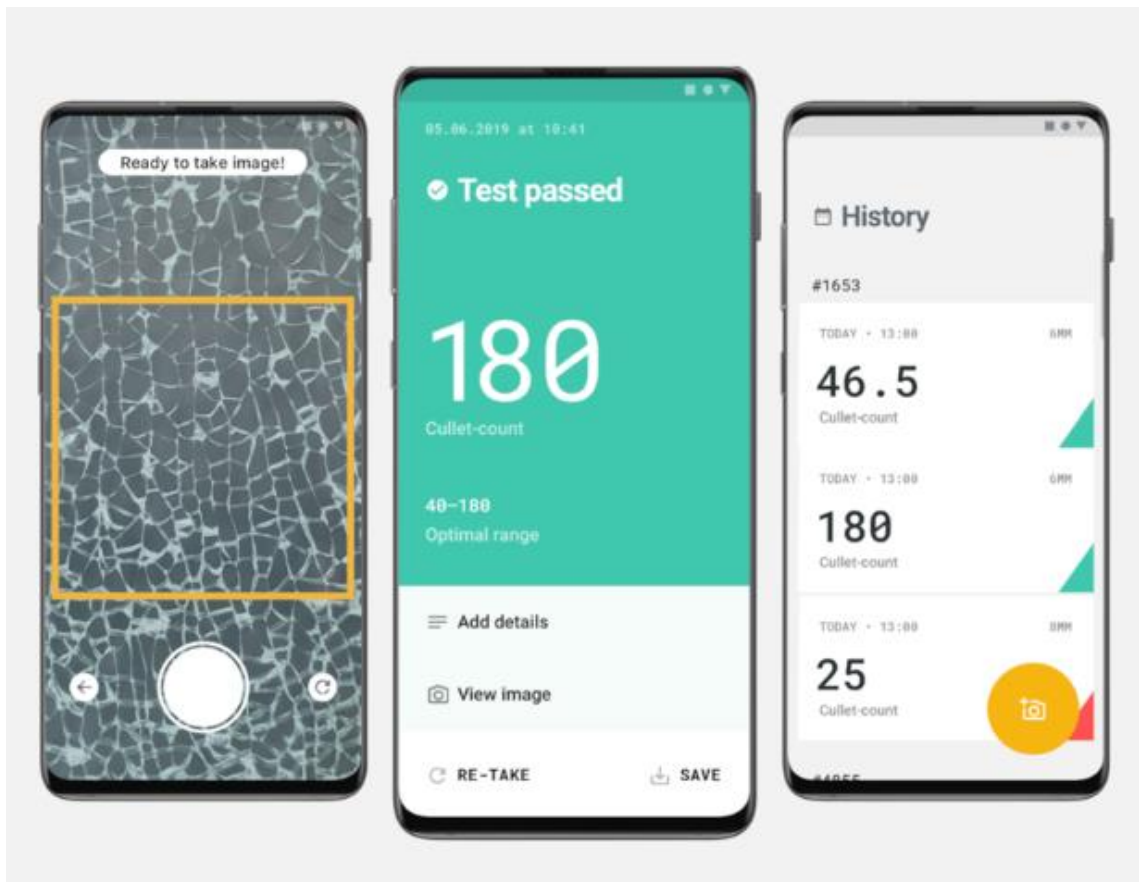


Image 6.

The Glaston Siru application was launched during the Glass performance days event in the summer of 2019 and immediately was found an interesting concept throughout the industry. The approach for the soft launch was to promote this application to spread awareness of the technology available, hence it was made free for anyone to download. This may be considered the Beta version as there are still limitations on what can be done in the app, such as storing the results in the cloud. The storing of results in addition to manual work of counting the cullets is the reason this was published, as previously results were written down on paper and stored in files. The publication of new features for this application, most importantly the storage of data will be available in the future with the development of Insight Reporting 2.0.

#### 2.4. MyGlaston

MyGlaston is a one-point access system distributed to all customers upon new machine deliveries, as well as existing machines which did not yet have the program. MyGlaston

is the system, which connects the previously mentioned reporting systems, as Insight Reporting Pro browser version is accessed via this platform.

The MyGlaston account generation process is currently a three-step process, which is intended to be simplified in the future and it also requires a background program AzureAD to create the accounts. It is based on the CRM platform of Salesforce, which allows Glaston to create the accounts by using the background information of accounts and contacts found in the CRM program. For a Myglaston account to be created for the user, their information needs to be found in the correct form in Salesforce, most importantly their name, company and e-mail address. Once the information is in the background program, customers may apply for an account through filling out a form at [glaston.net/myglaston](http://glaston.net/myglaston). After the form has been completed in total, there is an automation built in, which sends out an email for approval. This is constituted as the phase one approval. The purpose of the 1st approval phase is to check the existing data in the CRM program. Once this step is completed and the email received has been approved – follows approval phase two. The purpose of the 2nd phase of approval is to login with the created account and check that it is corresponding to the data of the customer i.e. the machines etc. are the correct ones. Finally, after the phase two approval has been completed, an automated e-mail will be sent to the applicant with their login details, the login site can be found from the aforementioned web address.

MyGlaston is important to the customers, especially those who have newly opened projects to be able to follow up on the information. MyGlaston is meant to store all of the most critical information about the customers machines. This includes tempering, bending, laminating and bending & tempering lines. In the portal the customer will be able to find related information to their machine for example user, instruction, and maintenance manuals. Service visit provided by Glaston will also be recorded on this platform and service reports will be uploaded, where the customer will be able to read what has been done and if any further actions will be needed. From this platform the customer will also be able to order spare parts for their machines via the spare parts arena, this however requires separate login details provided by Glaston Services. Most importantly MyGlaston is the home to Insight Reporting Pro, where customers will be able to access the data received from their machines. Image 7 displays the home page to MyGlaston.

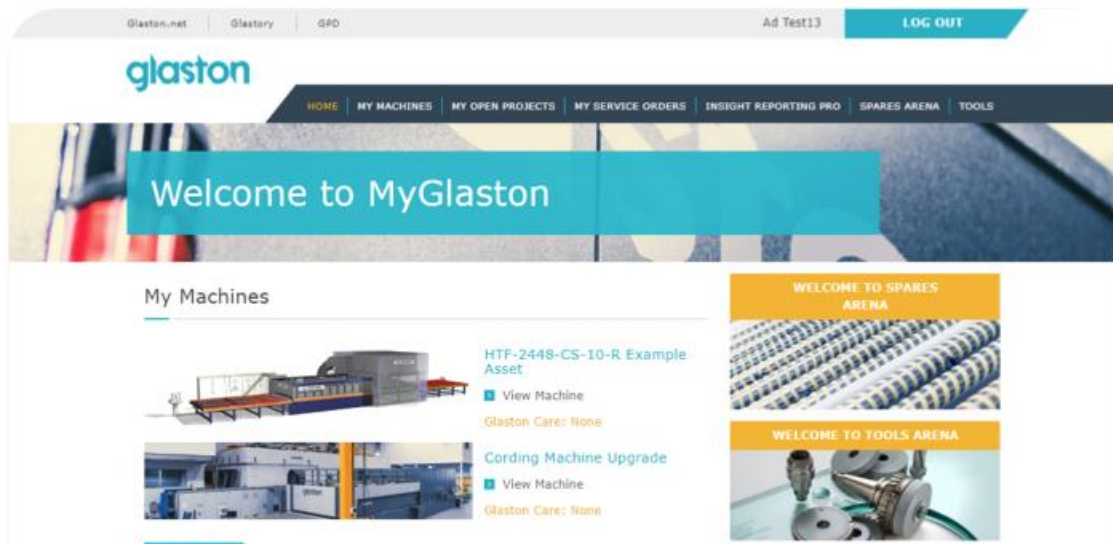


Image 7.

### 3 VALUE SALES

The theoretical background for this chapter of the thesis focuses on customer value, Glaston's sales process, traditional sales vs. Value-based selling, and to the communication of value to the customer. The aim here is to make clear the definition of value-based selling and the differences to traditional sales in regard to this case and how to better implement it internally.

The perception of value from the customer standpoint has been recognized as an integral part of the sales process for quite a while now, and this is becoming increasingly common with today's digital products such as Glaston's Insight Reporting Pro. Over the past decade, scholars have advanced our understanding on customer value and the key dimensions of the value construct in business relationships (Khalifa,2004). Value added sales are a key component in the selling techniques for online development tools such as the Insight Reporting Pro platform. It heavily relies on building up the inherent value the product has to offer in the eyes of the customer. Value calculators are widely used in company's today with the intent of calculating a product's or service's value, or in other words return on investment. Typically, these calculators are rather simple, using spreadsheet calculations with the basic additions, subtractions and multipliers. These tools can be helpful in proving to the customer the value and ROI. In the glass industry with multiple competitors coming from China, the market is becoming increasingly more price sensitive and customers tend to focus on the initial costs of the investment instead of the value provided over time.

#### 3.1. Traditional sales process

The traditional sales process in Glaston has been implemented to its current form via our CRM tool Salesforce, following the steps there. Since the introduction of the model of a sales process, there have been several attempts to enhance this model. (Shapiro, 2017) emphasized the importance of nurturing the relationship and acknowledged the process to be more complex than earlier studies had shown. In the sales literature, value co-creation has been translated as value-based selling.

In Glaston there is a positive understanding of the differences between the traditional sales model compared to the value-based model. This fact however also differs depending

on the salesperson as some are more geared towards the old-fashioned way and price driven selling. Below in the figure is shown an example of a traditional sales process.

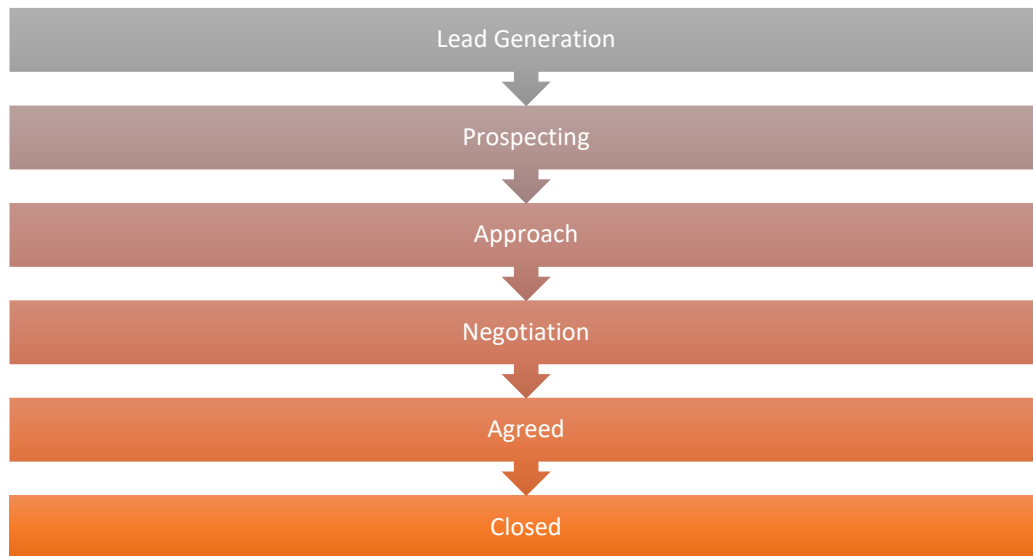


Figure 1.

The consumer's buying process has changed over the course of the past few decades with the invention of the internet and the immense availability of information found. Consumers are much better prepared and ready for a sales negotiation having found the information on desired products and services they require beforehand from the seller's website. (Goodbread, J. 2019) They are aware of what the product offers and the specifications that come along with it, and due to this value-based selling is becoming increasingly more important, so as to prove the value of the specifications.

There have been several attempts to redefine the traditional sales process ever since its first introduction to the business world as mentioned previously. There has been emphasis on the on a careful analysis process in regards to the customers organization's buying environment. These are important changes progressing towards the more modern way of sales processes and furthermore to the value co-creation. It was in 2011 when, Åge (2011) presented a more contemporary business to business model, which reflects more accurately to the modern environment. It is described as a complex dynamic process of "business maneuvering" that is further divided into four categories.

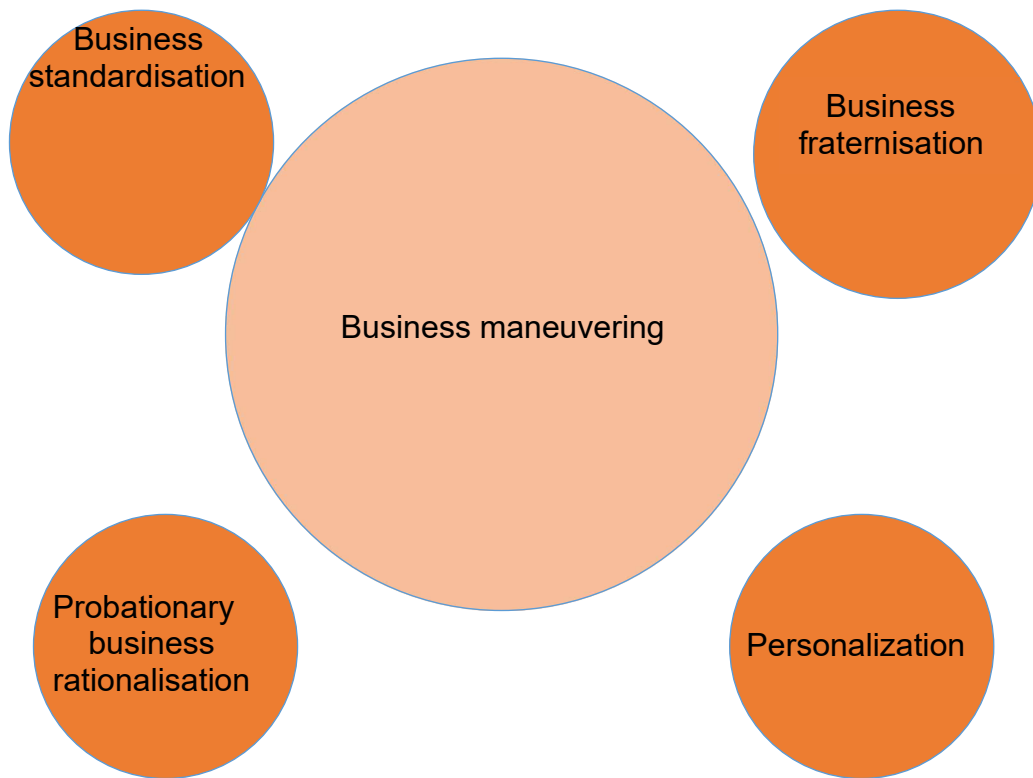


Figure 2.

### 3.2. Value-added selling

Value-added selling can be construed as a philosophy or a mindset of seeking ways to enhance, augment, or enlarge the offered solution to the customer. It's promising a lot and delivering what was promised, always looking for ways to exceed the customer's expectations (Reilly, T. <https://tomreillytraining.com/article/what-is-value-added-selling/>). Most importantly it is a proactive philosophy as salespeople have to take the initiative to add value. The idea is to provide the customer with more value during the sales negotiations in order to make the conception of the price a lesser importance. With this customer value focus in the sales process, salespeople are more geared towards making a difference instead of simply closing the deal.

Value-added selling is truly becoming more important for Glaston in general due to the price sensitivity especially in the European market. With Chinese competitors in the market being able to provide machinery at almost half the price of Glaston, it is imperative for the salesperson to be able to sell based on the value provided. This does not only apply to the heat treatment machines, but to the optional features of the machines and mainly focusing on the software-based products. It is often conceived that the prices of software products should not be as high as they are, as the costs are almost non-existent to the



seller. This perception is a somewhat understandable concern coming from the customer; however, it is important to recognize the initial investment and uphold costs that go into the creation and development of software-based products such as Insight Reporting Pro.

As Insight Reporting Pro development started in 2017, and the official launch was in 2018, the accumulated costs had been substantial already and was not currently generating revenue. All the while the product was being further developed as software typically is. This is a key point in why implementing a more value-added selling approach within the Glaston organization is crucial and furthermore the proper training and education for salespeople on the products. A proper plan on value-added selling and the roadmap for Insight Reporting Pro 2.0. is are the key components to this thesis in order to create more revenue for the company via the product. The product itself is used for the development of the customers' production process and therefore the value created is mostly based on how the customer uses the product. It is similar to the measurement tool sold by Glaston mentioned earlier, the iLook. It is difficult for the customer to see where the value is coming from if they are not implementing the products into their internal production plans.

### **3.2.1 Value sales process**

It has been shown that many companies find it difficult to present their products and offerings in such a way that differs from the competitors in order to create that unique value for sales. Often clients are under a certain time frame with regards to their orders, resources and general demand for results, which further creates a demand for tangible evidence on the value of the offerings. This is compatible for both purchase and after sales. Promises are often the currency found in sales negotiations. The pitches given by sales personnel use these promises to find increased efficiency for the customer, or better yet, a way to reduce their costs. The idea of value-added selling was brought forward precisely due to this reason, which instead of focusing on the price and specifications of a certain product or service, it focuses on providing the customer with some tangible figures on value. Different kinds of arguments are a great tool for any salesperson in addition to value calculators, which are used in co-operation with the customer. One example of a value calculator from Glaston is the payback calculator for heat treatment machines. This requires certain information on costs from the customer, for example energy and raw material costs, which play a major role in the payback time. Energy

consumption especially plays a major role in heat treatment machines as they are large machines requiring lots of electrical power for the heating and cooling process, often resulting in extremely high costs to the customer. One point in value-added selling for Glaston is the high energy efficiency provided by the most recent technology. This is also important as in Europe, many countries provide benefits if the buyers are able to reduce their energy consumption in machinery.

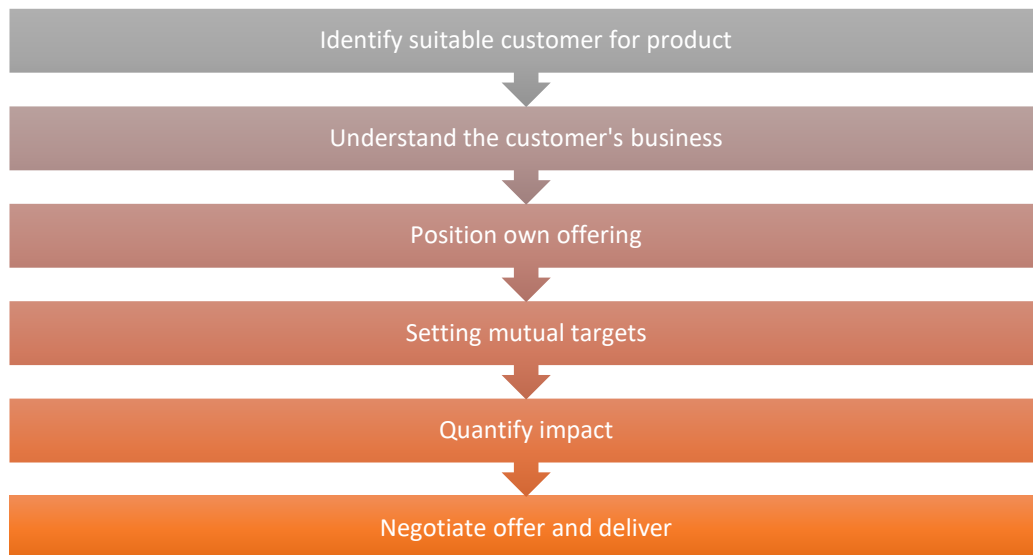


Figure 3.

When comparing the traditional sales process to the value-added selling process, there are multiple variable which differ greatly. The ultimate goal might be similar, as the intent is to create revenue and close the deal. The traditional sales process is a seller-focused method of making a sale, which primarily focuses on the process of generating new business, building the pipeline, questioning the prospect, presenting the offering, and from there on out negotiating on the price and other details before finally closing the deal (Collins, P. 2018, <https://www.profitmakersales.com/2018/03/the-value-added-sales-process/>)

The value-added sales process can be identified immediately from the first section in Figure 3. It is primarily a customer-focused approach to the sales process, as the model presented is designed to create the most value for the customer with communication. It is also different within the time frame compared to the traditional sales process as it goes beyond the time of closing due to the mutual goals set alongside the customer. It is important to create these goals and follow-up on them as this provides marketing material in the form of reference case making the sale that much easier the next time around.

Understanding the customer's business model is essential because it is the key to move further in the sales process. In particular, understanding customer's goals, their earning logic and what is truly considered to be important for them. In the stages when drafting the value proposition for the customer, it is important to be able to identify the customer's problems and the root causes of why the product would bring them extra value. This is created in order to bring mutual benefit for the customer and to the provider where the key task is identified. During this stage, quantification efforts are seen to be in a major role. Salespeople can base their customer value quantification efforts on different methods such as customer specific value calculations, value studies, simulations, ROI studies, lifecycle calculations and knowledge about the value created for reference customers. The final stage of communicating the value is the stage in which the salesperson has to convince the customer in a way that leads to sales, and the research suggest that the most salient aspect of the sales communication is a credible demonstration of the offering's contribution to the customer's business profits.

### **3.2.2 References in value sales**

Reference cases are an important in the sales process in order to demonstrate value to the customer via previously successful sales and projects. The author of this thesis has such experience when visiting a customer to give a sales pitch regarding software-based products. The purpose of the visit was to demonstrate the value of the offering, which was overlooked during the original sales process due to the use of the traditional sales process. The use of proper value-added selling from the beginning of the process would also be a good way to cut costs as no more visits to the customer post-sale would be required. This would include the flights and accommodations of the trip, and if there are multiple cases where this is an issue, the costs truly ramp up.

If a supplier is able to provide higher value than its competitors to customers, the supplying company could also try to attain a higher price form its customers. This would lead customers to buying higher value for higher price. However, this task is not as easily done as it is said. It is often that customers are unwilling to pay for extra value and rather focus on the initial investment costs that a project would incur when comparing to the competitors alternative cheaper products and services. It is the goal to demonstrate the monetary value in these software-based products to the customer in the form of saving costs, as it is often in this world that pricing is the most crucial element. The notable

element when performing cost calculations in order to determine payback time of certain products is to note that these are only estimates. It is extremely difficult if not even impossible to quantify the true costs that would occur for a customer based on the calculations.

A way to achieve the supplier's intentions and goals of a higher value for the higher price is to give customers higher incremental value in relation to increase of the price, but from the supplier's perspective this wouldn't be the best alternative. It is difficult to perceive what other routes the supplier could take in order to achieve the goal of a higher value and higher price. One potential way to do it is to provide reference case to the customers. Reference cases can be seen in two ways; firstly, a reference case to present to the customer of a completed and sold project, by demonstrating the goals and cost savings that they have achieved. The other reference possibility would be to take the ongoing negotiations as a reference case giving the customer a lower price in order for the supplier to be able to use them in the aforementioned way in the future. This latter way of referencing is necessary in the beginning phase of new products and offerings, which are still relatively unknown to the market. It will provide a solid steppingstone in order to promote the product. When focusing on value-added sales however, the firstly mentioned reference case would be ideal to demonstrate the value to customers.

Having multiple reference cases at your disposal in the sales negotiations creates a more trusting environment between the customer and supplier. It is not merely the supplier's word anymore that the customer has to rely on, but proven facts coming from other cases around the world, and this is an extremely valuable resource to be able to provide.

When focusing on Insight Reporting Pro 2.0. launch and its productization, it is important to have reference cases to provide to the customer. When the author of this thesis started working for Glaston Finland Oy in January of 2019, the author was given product managerial control over the product and its development. Since then three valuable reference cases have been built together with customers from Australia and Europe. The goal of this partnerships was to pick the customers brain on what was required for further development of the product and the main value providers from their standpoint. This is how it started off, but after roughly six months of working together with the customers the product is moving forward into becoming viable for its new launch, with the backing of this customer references to further prove the value it provides.

### 3.2.3 Presenting the value

Reducing costs are a key issue in business and this is something that the author of this thesis has come across multiple times in sales negotiations and pitches. It is often times very difficult for the customer to see the value in a software-based product and furthermore the costs that it bears, as essentially, they are mostly thinking from the supplier's standpoint as to the costs that the supplier is accumulating running the product. In software-based products the costs bared by the supplier are non-existent, but this should not affect the pricing of the product, if there is the ability to demonstrate to the customer on the value it provides. What it comes down to, is the ability to articulate the value to consumers (Graham, S. <https://shawngraham.me/blog/communicating-value-to-customers>).

No matter how long the supplier in cases have spent developing their products and services, it cannot be expected for the customer to appreciate the true value it will bring. It is about aligning the customers interests and expectations, which they value the most in accordance to the offered product. This is what worldwide known brands such as Apple and Amazon have been able to do (Graham, S. <https://shawngraham.me/blog/communicating-value-to-customers>). Such is the case between Glaston and its competitors, as often it is the case that customers generally value the Glaston brand higher than those of its competitors, knowing they provide quality products with components from top of the line manufacturers in Europe. Brand association is an integral part of the value-added selling, as with a positive brand image going into the sales negotiation, gives a slight advantage.

Being objective about the customer and their desire's is essential when presenting the sales pitch and value that the products have to offer. Being specific in communications with the customer truly helps with the process and having tangible elements to display why the product is superior in value to those of the competitors is a benefit, merely stating that the quality is higher will not be sufficient (Graham, S. <https://shawngraham.me/blog/communicating-value-to-customers>).

In figure 3. It is stated that "understand the customer's business". By understanding the customer's business, salespeople are generally better able to focus more on what to present to the customer and not to forcefully sell a product that is not required. If the

salesperson is able to identify properly all of the customer's needs, it will make the value-added selling increasingly more efficient and easier to communicate value. For example, with Insight Reporting Pro, which is able to demonstrate the user's full production details down to their efficiency, will enable the customer to make adjustments based on the collected data for further improving their process. When entering the sales negotiation, the salesperson has the possibility at investigating the data beforehand and realizing what the customer is lacking in. Giving an insight on the customers data at a sales meeting can directly show the customer what they are able to receive from the product, and why it would be beneficial for them, as cutting costs are typically the primary focus when running heat treatment equipment.

#### **3.2.4 Value-added selling & Insight Reporting Pro**

The value-added selling process for Insight Reporting Pro has been lackluster over the past year, and the differences in geographic regions is noticeable. This is due to the approach taken by salespeople in different parts of the world. The value-added process starts from the salesperson itself, as if they do not believe in the product and are having difficulties in proving the value to the customer, it goes without saying that the customer will also have difficulties believing the value it provides.

In light of the aforementioned, multiple training sessions have been organized internally, not only for salespeople, but for maintenance and installation crew, who spent a considerable amount of time face to face with the customers. It is the author's belief that training the service personnel to market the product at customer sites would greatly impact the interest within customers towards the product. Furthermore, presentation materials have been provided via internal sales tools to be able to provide to the customer, however, ultimately it will be depending on how the salesperson presents the idea to the customer.

#### 4 SUBSCRIPTION-BASED MODEL

This chapter of the thesis will be focusing on showing the benefits and downsides of a subscription-based pricing model in relation to software-based products, such as the Insight Reporting Pro and furthermore on how it intertwines with value-added selling.

The fundamental goal of every business is to create a product, which is to the liking of their customers, and be able to sell as many units of that product as possible. This would result in diluting fixed costs in order to compete on margins. This is more in the model of the traditional sales process as explained in the previous chapter, and the world is evolving along with the businesses. It is argued that the goal of the businesses today should be revolving around the wants and needs of a particular customer base, then create a product or service which creates continuous value to the customer. This latter way and goals is more in line and based off of the value-added sales process (Tzuo, T. 2018). The idea is to turn the existing customers into subscribers in order to develop recurring revenue instead of the one-off type sales deal. This is also the goal for the productization of Insight Reporting Pro 2.0., however, it must be taken into account that this is not the main product that Glaston is selling.

The evolution of this process has evolved rather rapidly over the past decade with the emergence of the streaming giant Netflix for example. Ten years ago, the signs became apparent in that regard as DVD purchases started to slowly dwindle down, and eventually leading to Netflix almost single-handedly killing off the competition, such as Blockbuster. Over the past five years, thousands of manufacturing companies, including Glaston, have been investing in sensors and connectivity (Tzuo, T. 2018.). In the case of Glaston this is very precise as digitalization and automation of the heat treatment equipment is the future of the industry. Multiple variables of data are coming from different sensors in the machine, such as energy consumption from sensors inside the furnace, loads produced by the scanner, loading pattern by the DLP sensors etc. The ultimate purpose of the sensors is to collect and transmit data – lots of it. All these different kinds of sensors will be beaming back information into centralized servers, so that companies can start using analytic platforms to look for patterns and ways to improve things. The entire system is commonly referred to as the Internet of Things. IoT refers to the digitalization of the physical world through sensors and connectivity (Tzuo, T. 2018). IoT is construed as a new source of revenue for those who have a product with the capability to collect data from it and have the customers who find the collected data of

value. IoT means offering remote monitoring services or possibly preventative maintenance services for new streams of revenue.

#### **4.1. Subscription-based model and Insight Reporting Pro**

The Insight Reporting Pro product is based on the subscription-based model as described in the aforementioned chapters. It is part of the IoT-world and lives off of the data Glaston is able to collect from its customers via the various sensors. The current situation for the product is not ideal, as it is struggling to create recurring revenue. This is both due to the fact that it is a fairly new product also unknown to a large portion of the customer base, and the fact that value-added selling has not been properly implemented throughout the company.

The plan for Insight Reporting Pro 2.0. is to continue with the current model but change the pricing because of the additional features being added to it. This is further explained in chapter five with the roadmap. Currently the product is priced at 300€ per month, which is a fairly low price in comparison to the cost savings customers would be able to make with it. However, the costs are not nearly as great as the selling price, but it is imperative to take into account the development costs that have gone into the product, maintaining the cloud services and other support costs that occur when dealing with customers.

#### **4.2. Subscription-based strategies**

As per Figure 3. The first step in the subscription-based strategy is to identify and acquire the appropriate customers for the case. This is also important for the reference cases mentioned earlier as the newly attained customers will be taking a look back at your successful projects with earlier customers. Flexibility plays an important role in the beginning of a new product launch to avoid being too niche, however, to create the flexibility, a diverse set of customers is needed (Tzuo, T. 2018). That is why for Glaston the reference cases come from different parts of the world, whom have different types of production and demand for their products. Expanding the sales team would also be a key component to the process, but due to the fact that Insight Reporting Pro is only an additional feature that customers may purchase, and not the main product itself, which are the heat treatment machines. Scaling the sales team at this point is not needed.



### 4.3. Traditional vs subscription based model

This portion of the chapter will take a look at the traditional form of a company's financial statements, against those of the recurring revenue business model. The financial system today revolves around the ability for companies to create these financial statements that can be audited and compare companies against one another. The system rests on a concept known as double-entry bookkeeping. Simply put, the basic premise for this model is that your credits have to match your debits. For every financial transaction, both column entries have to match (Tzuo,T. 2018). This information, when accurately and punctually described, create an audit trail. It also creates an aggregate view of your total assets, which should be equal to the sum of the liabilities and equity. It is a very simple but effective equation, which allows for the creation of income statements, balance sheets, and cash flows. Below is a crude income statement that is typically taught in introductory business classes:

<b>NET SALES</b>	100€
<b>COST OF GOODS SOLD</b>	40€
<b>GROSS INCOME</b>	60€
<b>SALES &amp; MARKETING</b>	20€
<b>RESEARCH &amp; DEVELOPMENT</b>	20€
<b>GENERAL &amp; ADMINISTRATIVE</b>	10€
<b>NET INCOME TOTAL</b>	10€

Figure 4.

Figure 4 displays very simply the traditional income statement, where it shows that units were sold for a total of 100€. It also brings out the fundamental costs that went into producing the unit or units sold, such as, the cost of goods sold – including raw material costs and production costs, personnel costs. How much it took to sell those units, R&D expenses, and overhead costs such as HR expenses. Some of these costs are fixed, such as the research and development costs, so the more units that are sold, the lower the total cost will be.

Annual recurring revenue is an important term regarding the subscription-based model of the income statement. ARR states the amount of expected revenue that will be generated by the customers using the subscription-based service. It is revenue that recurs, as opposed to the revenue that gets booked only once. Typically, during a financial quarter,

subscription economy companies take a look at how much their ARR has grown or decreased using a formula. This formula takes into account the starting period at a specific annual recurring revenue run rate, from this is subtracted the cost of goods sold and other costs that affect the running of the business and investment into R&D. The churn rate of the customers has to be taken into account. Investments into growing the ARR by acquiring new annual contract value from both new and old customers. This brings to the conclusion of the new ARR run rate as the next period begins. Formula displayed below:

$$\text{ARR}_n - \text{Churn} + \text{ACV} = \text{ARR}_{n+1}$$

Figure 5.

<b>ARR</b>	100€
<b>CHURN</b>	10€
<b>NET ARR=</b>	90€
<b>RECURRING COSTS:</b>	
<b>COST OF GOOD SOLD</b>	20€
<b>GENERAL &amp; ADMINISTRATIVE</b>	10€
<b>R&amp;D</b>	20€
<b>RECURRING PROFIT=</b>	40€
<b>SALES &amp; MARKETING</b>	30€
<b>NET OPERATING INCOME</b>	10€
<b>NEW ARR (ACV)</b>	30€
<b>ENDING ARR</b>	120€

Figure 6.

The key difference in the double-ended bookkeeping systems income statement versus the subscription economy income statement is that now it is starting with ARR as seen in figure 6. The subscription income statement looks forward. The most important difference and to fully understand the table is to note that the growth costs, which in this case are sales & marketing, is that they are matched to future revenue because the sales and marketing in a financial quarter adds to the ARR, but the revenue will come in the future. In the traditional sense this is referred to capital expenditure or CAPEX (Tzuo, T. 2018).. These are costs that are allocated to grow the business and in this case, it is

assumed that 100% of the growth costs are allocated towards sales and marketing. The higher a company's recurring profit is the more money they will have left to allocate towards growth.

#### 4.4. Padre operating model

Being a customer-focused company is a truly simple concept to grasp, however, it comes with difficulties in making it a reality. It requires a cultural change internally, and most importantly within the salespeople as mentioned earlier in this thesis. Typically product cultures are built around thinking and organizing like assembly lines: stay in your lane, do your job, then pass it on to the next person (Tzuo, T. 2018). This chapter will be focusing on the operating model known as PADRE. PADRE is a way of visualizing a company as an integrated organization composed of eight subsystems, all tied to the customer. They are split up in the following ways.

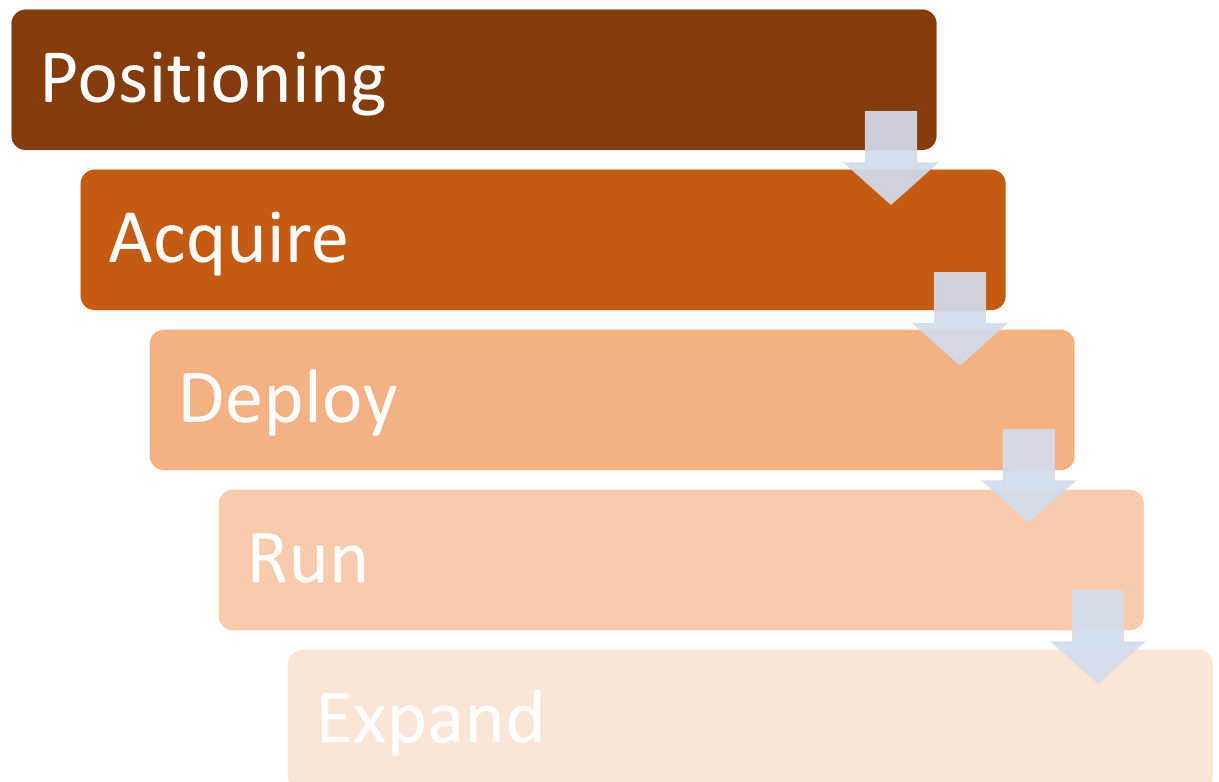


Figure 7.

#### **4.4.1 Positioning**

Starting off with positioning, the key goal of which is to build market awareness and translate that into demand. This is mostly accomplished by letting the marketplace know of the possibly new product and have them understand the story and value behind it. This is not only in reference to potential customers but applies also to other influencers of the product such as journalists and analysts. The key idea is to gain an interested potential base of subscribers to engage with the company in many forms which include visiting the company website and marketing material on it, downloading the app and talking to salespeople or agents.

In Glaston Finland Oy this phase is accomplished via the reference cases established at an earlier phase, providing marketing material to the website, and via trade fares such as the Glass Performance Days or Glasstech. It is known to the company who visit the website and what they are looking at in particular, thus creating potential leads to follow-up on. During trade fairs, new IoT features are typically on display, such as the Glaston Siru application which was launched during the 2019 GPD. In these cases, there are salespeople attending, whom have a good knowledge of the product offering and are able to provide support to customers that may need it.

#### **4.4.2 Acquire**

The next subsystem to discuss is the acquire subsystem, which helps define the potential buyer's journey. It is a stage where it is imperative to be thinking from the customer's standpoint and learning about their needs and what drives them to make the decisions. Learning about the customer's criteria for success, business plan or cutting down costs and comparing these values that the customer presents to other alternatives. It is about alignment and once again about truly listening to the customer to be able to provide a mutually beneficial product or service to their disposal. It is only after the customer enters and agreement to start the subscription-based that the seller is able to provide value for them. The more customers there are having subscription agreements in place, the better the seller will be able to learn from all of them and about the subscription model in general.

### **4.4.3 Deploy**

After the acquire phase is completed, it raises the question of what is going to happen next. The deploy phase is where the ultimate goal is to get the customers service up and running to be able to start providing value for them. This includes the planning of how to get the customer integration operating as smoothly and efficiently as possible. Glaston Finland Oy has various steps in this phase regarding the Insight Reporting Pro product, but for Glaston Siru and MyGlaston, this planning should already be accomplished during the positioning phase as they don't require complex actions for the customer to be able to use them. Glaston Siru for example is a simple download away for the customer to use. However, Insight Reporting Pro has various steps that require completion before the IoT data can be examined. Firstly, there is the installment of the data gathering software on to the existing machines, provide that they have the compatibility, this can fortunately be done via a remote connection. After that it is required to set up the proper information about the service into the CRM software, and finally connecting the CRM into the data analyzation program. There are multiple things that may go wrong during this process and therefore requires coordinating with the customer as well as other in-house personnel.

### **4.4.4 Run**

The lifetime of a subscriber is essential in comparison to other on off payment transactions as they are there to generate recurring revenue. It is important to keep the customers satisfied from the start of the project and all the way through their subscription life. Anything that doesn't build the value for the customer will truly be detrimental to the growth and value of the seller's business. Checking on the usage of the service and specifically, the most viewed tools that the customer are using helps grow the mutually beneficial success. Having downtime on subscription-based software products or services can constitute as aggravation from the customers end, and in the worst-case scenario, loss of revenue due to the loss of subscribers.

### **4.4.5 Expand**

The final goal of the PADRE model is to expand. There are three things a company wants from their subscribers: retention, growth and advocacy (Tzuo, T. 2018). The customer has to understand the value that is provided by the service and the seller has to make sure

that they are delivering an offering to the customer that is better than what they could get somewhere else. It is also supported by three core subsystems, which are related to the internal aspects of the model: People, product and money. Competent people are the key to releasing, creating and sustaining a product or service. From the costs side of the business it is important to keep the head count and allocated resources to a project within a certain limit, which would not transcend the need from the market and therefore create unnecessary costs for the selling company.

## **5 ROADMAP FOR INSIGHT REPORTING PRO 2.0**

The essential question of this thesis was how to proceed in developing Insight Reporting Pro with new features and the most efficient way of selling the product according to value sales and the subscription-based model. This chapter dives deeper into the concrete actions required for taking the next step in the process of generating a recurring revenue stream with this software-based product. The author of this thesis has had numerous internal and external meetings with colleagues from Glaston Finland Oy, especially the digitalization team, as well as with customers whom have been involved in the development of more desirable features in the future. The Insight Reporting Pro 2.0 roadmap will be a part of the bigger digitalization roadmap for the Glaston Group and will be in this thesis found in appendix 1. The roadmap will also include reported progress for the Glaston Siru application and its future, with its ties with the Insight Reporting mobile application.

The road to digitalization has been a long and continuous road, not just for Glaston, but for companies worldwide. Recurring revenue streams have become the norm in many industries regarding software based and IoT products as they are a great way to earn profits by cutting the costs once products are operational. Insight Reporting Pro is not a main product in the Glaston portfolio, but rather a complimentary one with the value coming from helping customers to improve their production and cut costs. A small price to pay for potentially substantial savings. The word digitalization has been floated around the world for quite some time now and it is perceived to mean different things to many people. In Glaston's case its most crucial element is to create products and services by using the data gathered from the machines using data gathering software. It is also important to understand the background programs, which make the data available and presentable, such as data analytics tools and CRM programs.

### **5.1. Ongoing development**

The roadmap for Insight Reporting Pro 2.0 and its launch begins with the completion of unresolved tasks and issues with the current system as well as seeing through the additional features that have been started, but not yet completed. These features include adding customer fed data into the system via an integration method, and thus would become visible for customers on the platform. The customer fed data integration is all about a cost evaluation method for the customer. It provides the customer with the ability

to see the costs incurred over a period of one year after activation, considering raw material, labor and energy consumption costs.

The raw materials cost is divided by the glass type the customer is running, whether it be clear or low emissivity glass. Other types of glass shall not be included at this point due to the large variety of glass coatings and painted glass in the market. The cost of the glass shall be marked as € per square meter. Labor costs will take into account the average manhour cost, and the average number of employees working on the specific line that the customer is viewing. Labor costs shall be determined by € per hour of labor. The energy consumption of the heat treatment equipment provided by Glaston is measured by sensors inside the heating section. These machines can be quite heavy on the usage of energy, and that is why this is the most crucial data point to the costs portion. The energy consumption cost shall be simply marked by € per kilowatt hour.

The development of this feature is based on the feedback received from customers and the various reference cases in place. It is entirely reliant on the fact that customers would give up their cost data, which can understandably be a sore point for many of them, and as per the agreements in place the data would then be owned by Glaston. Assuming that the cost data is in place, there would be various graphs constructed based on their production from the previous year and continuing on from the moment they first take use of the new feature. The first graph would indicate the costs in € per square meter of glass for the clear glass type. Secondly, there shall be a graph representing the average cost by glass type displaying the fluctuation happening over time. Thirdly there shall be a chart constructed on the product cost structure, so for example, a customer could have their production split by their glass thicknesses and glass types, and for those it would display the cost structure between raw material, labor, and energy costs. Finally, a general graph shall be applied to the overview page of Insight Reporting Pro to demonstrate a general pie chart of the breakdown for total costs. The costs in general will be applied to a separate page where the customer would be able to see the aforementioned graphs. The settings page is where the customer will be able to input cost data.

Finishing other smaller features such as comparison options and implementing time shifts for the customers viewing are also going to be implemented in the future. The comparison for energy efficiency between machines will be the next addition but does not require a substantial amount of resources considering that the coding background is already in



place, it simply needs to be added to the energy efficiency page as well. The time period comparison is a much sought after feature as it will allow the customer to visualize how the machine performance compares between time periods, for example comparing annual or quarterly productions.

## 5.2. Next steps

The next phase after the completion of the ongoing development targets that currently are in place for Insight Reporting Pro, is the development of the Azure cloud service for heat treatment machines, which contains the iControl backup, and Glaston API.

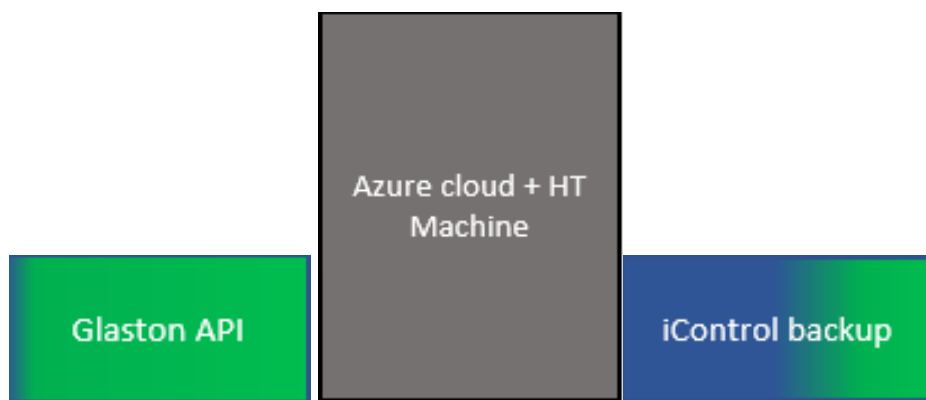


Figure 8.

These upcoming features are excellent additions to come as they provide concrete value to the product in addition to the value the reporting aspect already provides. With the iControl backup, customer will no longer have to fear losing important data from their machine such as recipe data. Recipe is what the industry refers to the settings on the machine which are used to run a certain glass type, thickness and size.

The most time and money consuming project to be established for Insight Reporting 2.0 is the modernization of the Glaston insight application. This will be done together with the digitalization team and their newly launched product Glaston Siru. Glaston Siru is already an application of its own with a unique purpose, but the idea is to involve the reporting data into the application as well and discontinuing the currently existing Insight mobile application due its unreliable data and other issues. The Glaston Siru app shall still be free for customers to download, together with new machines sales, but the addition of the reporting will be a separate feature and require the purchase of Insight Reporting

Pro 2.0 to activate. There shall be a login option to the application to determine whether the user has access to the reporting and, this will also be controlled by our background programs and there will be no other way for the customer to access it otherwise. The other aspect connecting the Glaston Siru application to Insight Reporting Pro 2.0 program, shall be the data gathered on the cullet counting application. Currently there is no way for the customer to upload the data from their pictures to the cloud, and cullet counting has been conducted manually. With Insight Reporting Pro 2.0 this feature will become available and customers will be able to store the data to the cloud.

The addition of machine health reports is also in the pipeline for Insight Reporting Pro, however, during the writing of this thesis it has become apparent that the timeframe is not doable alongside the other added features that are coming. This is due to the fact that it requires work from other functions within the company and the development of the feature is still at an early phase. The general idea of the feature would be to give alerts online based on the machine’s own alerts. These alerts can happen for various reasons, for example too much blower vibration, scanner issues etc. This would then provide the customer with valuable information on necessary machine health checks that allow them to perform maintenance on the machine before having severe issues.

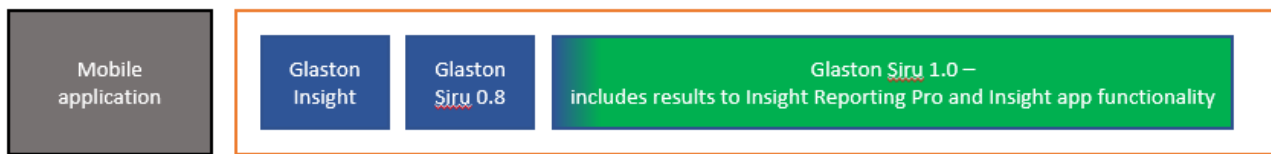


Image 8. Displaying the features for the mobile application



Image 9. Displaying the features for Insight Reporting Pro 2.0

## 6 CONCLUSION

In the introduction of this thesis the current situation of Glaston Finland Oy and Bystronic Glass were discussed, and while this provides many opportunities, it also causes some distractions and delays. The Roadmap for the product called Insight Reporting Pro 2.0 was the main goal of this thesis, alongside with figuring out the best way to implement value sales to the subscription-based theme that software products have. During the writing of this thesis, there have been multiple changes inside the company hindering the processes and development of certain products. The digitalization part was solely focused on what is happening within Glaston and was not meant to be a generalization of digitalization in the world. In that chapter the different products and tools were explained and how they connect digitalization and IoT into Glaston.

This thesis studied in depth the way to value sales and its counterpart the traditional sales process to give insight on how to improve the sales process regarding these products, as they are not meant to be a one-off payment and forgotten about. The same stance was taken into account when studying the subscription-based process and the way its income statement compares to the traditional one. These findings further assist in the development of Insight Reporting Pro and its future via sales & marketing and by taking a new approach internally to these processes. The clear findings were from these chapters that there must be a shift in the way salespeople make their approaches and case studies in regard to the customer, as well as explaining the features provided by the product with the customer and value in mind.

The value sales process displayed in figure 3 is a key component moving forward in bringing the information out into the market. This way of acting where the salespeople conduct in depth inquiries into the production of potential clients and their needs would truly be beneficial in acquiring more revenue from Insight Reporting Pro. Understanding the customer's business and creating a mutually beneficial business plan would be a great step towards the future, however, with limited resources and the product not being the primary income source for the company, it may be too unrealistic to go this in depth. It does not however take away the need to present the value provided to the customer and understanding their business.

The current situation analysis for the state of Insight Reporting Pro demonstrates that the key components in making the product a success are already in place. It is still a fairly new product considering the development started only over a year ago in 2018, even though the mobile application platform started development in 2017. This leads to the conclusion that the issue could be somewhere else besides the product, and new approaches have to be taken into place if the product is to become more of a standard offering in relation to the heat treatment machines.

The mobile application will be the biggest consumer of time and money to develop as it will require a third-party involvement and estimations about costs are so high that they have to go through the executive management group for approval. This is also another factor which could possibly hinder the development process in general if approval is not granted. The other option is to develop the application in house, but with limited resources this would also be somewhat troublesome. The Glaston Siru application was received with much praise from the market and with the current state of promotion regarding digitalization coming from the official statements from Glaston, it is hard to see that the appropriate funding for the development would not be received.

The ultimate goal of this thesis was to establish a roadmap for the development of the product Insight Reporting Pro 2.0., which would later be added to the total digitalization roadmap for the company. This was accomplished during the writing of this thesis and the plan has been well received from superiors at Glaston. The multiple features to be added on top of the new mobile application are some that provide concrete value in addition to the value provided by the production reporting. Glaston API and the iControl backup represent this concrete value provided whilst additional features such as the customer fed data, time and energy comparisons, and the Glaston Siru cloud availability provide additional value. The goals have been set for the creation of this product, but its launch date remains unclear as there are multiple factors affecting the development process. Currently the main one being the data platform provider switch in the fall of 2019. This new partnership will have to be fully established before further action is taken.

Implementing these processes to the salespeople as well as the addition will bring the product closer to success.

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## 8 APPENDICES

### Appendix 2. Marketing & Training Material for MyGlaston

**MyGlaston**  
**One-point view on all things Glaston for you**

- Gives you easy, one-point access to:
  - existing machinery data, documentation, contacts etc.
  - new and ongoing projects
  - machinery services & spare parts arena
  - digital services – Insight Reporting Pro

**glaston**  
 GENUINE CARE

Appendix 3. Marketing & Training Material for Insight Reporting Pro

# Insight Reporting Pro

Online production reporting tool available as an optional feature for all Glaston iControl tempering lines

Reporting types:

Overview, Production, Energy consumption, Machine state, Quality

## Overview

- Machine state summary
- Amount of loads by glass type
  - Clear/Low-E
- Number of loads by glass thickness
  - Clear/Low-E



## Production

- Average bed utilization %
- Average bed utilization % by thickness
- Produced square meters by date
- Number of loads by date



## Machine state

- Machine state summary
- Production hours
- Production efficiency
  - Processing time
  - Processing time + idle time
- Availability
  - Error time
  - Feed time
- Machine state by date



## Energy consumption

- Average energy consumption (kWh) per sqm by glass thickness
- Energy consumption by date



## Quality

- Average iLook quality values by
  - Machine
  - Thickness
- Reports leading and trailing edge kink and roller wave values measured
- Distribution of iLook quality values
- Displays how much variation there is in quality in production
- Note that quality reporting requires iLook measurement system

