

# Bimodal IT Service Management - Case UPM

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## **Abstract**



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It is clearly visible in these days that IT has to be able to respond faster and faster to new business requirements without impacting the quality. At the same time when there is need to act faster on new digital business opportunities there is also need to serve the more traditional operations that need to be compliant to legal requirements, security requirements etc.

Purpose of this study is to create fit for purpose Service Management framework for UPM IT by studying bimodality and it's possibilities in IT Service Management. UPM IT has strategic role in UPM Business and consequently it is crucial that IT is able to respond to the needs business is having to be able to change, develop and grow.

The study concentrates on bimodality and IT Service Management. The purpose is to research the opportunities of bimodality in IT Service Management and create a framework for applying it. In the support of the framework companies are able to start the development path towards bimodal IT Service Management.

The case study applies the framework in the practice and presents the results as a development proposal and roadmap.

## Keywords

ITIL, Bimodal IT, ITSM, Service Management, DevOps, Pace Layering

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## **Abbreviations**

Bimodal IT-having or providing two modes, methods, systems, etc.

**DevOps** – development operations, small scale continuous development beside the IT service in operation.

Effective – To be more effective, as purpose to create more revenue

Efficient - To be more efficient, as purpose to be more cost efficient

Era - denotes a clearly defined period of time of arbitrary but well-defined length

IT - Information Technology

ITIL – Information Technology Infrastructure Library

ITSM – IT and Service Management

**Service Management** – methods and processes to offer and provide services according to customer business requirements.

**SIAM** – Service Integration and Management, this is a tool for multivendor environment to manage the multivendor environment in most efficient way.

**Pace Layering** – methodology for categorizing, selecting, managing and governing to support business change, differentiation and innovation

## 1 Introduction

Today we are living in a world that in many ways is relying on Information Technology (hereinafter IT) and it's possibilities. We are living the IT Era where information technology is surrounding us, there is computer integrated to our fridges, washing machines, cars and many other places. Automation in factories and many other places is based on IT. Simply we can say that IT is everywhere in our everyday living as also IT is very strong part of each business nowadays. In every company IT is the business or IT is supporting the business in some level, in some cases it is supporting and enabling the business and in some cases even creating new business. Today many companies are strongly going towards digitalization which again is mostly relying on IT but still called Business Digitalization as there is no reason to divide business and IT, there is no business without IT and no IT without business so the todays business is a combination of these capabilities.

Comparing IT to other industry fields e.g. clothing industry where factories were transferred to most cost effective countries, the same has happened to more traditional let's say factory type of IT systems, which are supporting the core business processes and are not requiring rapid and continuous changes.

These days IT is providing more possibilities for business. IT is easy to implement and there is no requirements for the customer to understand and make considerations regarding to capacity and IT infrastructure anymore. IT can be bought as a service the same way than any other service from some service provider like hairdresser or restaurant etc.

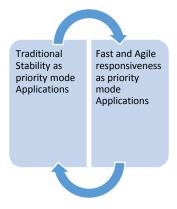
## 2 Objectives and Research Questions

It is clearly visible in these days that IT has to be able to respond faster and faster to new business requirements without impacting the quality. At the same time when there is need to act faster on new digital business opportunities there is also need to serve the more traditional operations that need to be compliant to legal requirements, security requirements etc. Purpose of this study is to create fit for purpose Service Management framework for UPM IT by studying bimodality and it's possibilities in IT Service Management. UPM IT has strategic role on UPM Business which for it is crucial that it is able to respond the needs business is having to be able to change, develop and grow. Fit for purpose IT Service Management framework needs to be flexible enough and support the rapidly changing UPM business requirements.

#### Research Questions:

- What is bimodal IT? Is it something new and why it is so much discussed at the moment in IT world?
- Bimodality in IT Service Management and its relations to ITIL. Is ITIL
  only for traditional 'systems of record' type of IT or is it also serving fast
  changing environments?
- How should the bimodality be visible in UPM IT Service Management,
   what changes it requires e.g. in organization, processes etc.?

Below picture is illustrating the bimodality amongst business applications. There are two modes of applications one representing traditional and secure enterprise applications and new second mode digital applications enabling the business transformation.



Picture 1. Stabile operations vs. Responsive operations, two modes. (Picture by Author)

## 3 Scope

Study is limited to IT Service Management and the theory will research the bimodal possibilities in IT Service Management.

One of ITIL lifecycle elements covers and describes best practices for service strategy. This part will be utilized for this study. Service Strategy is the center and origin point of the ITIL Service Lifecycle. It provides guidance on clarification and prioritization of service-provider investments in services. More generally, Service Strategy focuses on helping IT organizations improve and develop over the long term. (Wikipedia, 2015, Bimodality)

Another element important for this study is Service Design which volume has it's main focus on definition of service itself, based on how it is expected to be from service strategy. Its goal is to design and develop IT services, no matter if it is design of a new service or improvement of an existing one.

Also rest of the ITIL lifecycle stages: Service Transition, Service Operations and Continual Service Improvement lifecycle stages will be taken under consideration when reflecting bimodality to IT Service Management.

As a result of the research there will be bimodal IT Service Management framework created for the company. This framework can be utilized to serve business and its demand to receive fast and good quality services when not to forget the traditional IT requirements like reliability and continuity.

## 4 Methodology

Methodology for this research will be qualitative, as there will be wide background studies conducted by reading literacy, whitepapers, searching information from the Internet together with interviewing industry specialists of bimodal IT and Service Management. Value added by personal IT service management experience and information sharing between colleagues who are working in the service management area. All gathered information will then be evaluated, validated and utilized for the framework creation. Framework will be presented for the key stakeholders and then piloted as a case study. Also related material will be reviewed and studied and benchmarking with other companies conducted to create complete theory of the subject.

As said after the theory has been gathered studied and combined it will be time to create bimodal service management framework. Framework creation style is based on the existing frameworks like ITIL, Gobit, Togaf but will be lighter and high level framework like ICT standard (ICT Standard, 2015. Ict Standard).

Framework will be then introduced for company IT management team as a proposal and all the comments will be reflected to the work. Framework creation is iterative process and it will change in continuous manner. After the first version of the framework is approved it will be piloted and again developed against the findings, lessons learned from the pilot by utilizing ITIL Continual Service Improvement Deming Cycle as methodology (see chapter 6.5).

In the following picture it is demonstrated how the iteration work goes in practice.



Picture 2. Iterative process flow reflecting Deming Cycle (Wikipedia, 2015. Deming Cycle)

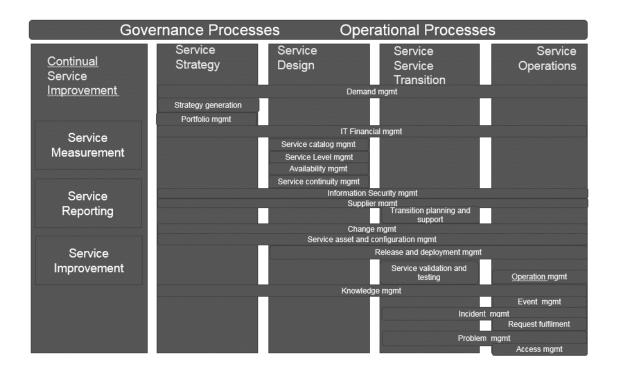
This chapter describes IT Service Management in short as it is not the main subject of this study to investigate and clarify IT Service Management but instead what is bimodality in IT Service Management?

Let's start to describe IT Service Management according to the ITIL which is the most widely accepted approach to IT service management in the world with more than twenty

years of service management practices. ITIL is established to be part of the organization's quality management.

ITIL provides a cohesive set of best practices, drawn from the public and private sectors internationally. IT Service Management (ITSM) derives enormous benefits from a best practice approach. Because ITSM is driven both by technology and the huge range of organizational environments in which it operates, it is in a state of constant evolution. Best practice, based on expert advice and input from ITIL users is both current and practical, combining the latest thinking with sound, common sense guidance.(Wikipedia, 2015. ITIL)

The picture below is an illustration of the ITIL governance and operational modules and processes. It illustrates the IT Service lifecycle management thinking. Previous version of ITIL (V2) did not cover the whole service lifecycle management but the next version (V3) does. Version 3 was created to cover the whole IT Service lifecycle management from strategy to the Continual Service Improvement.



Picture 3. ITIL Governance and Operational Processes (ITILV3, key element guide, Service Strategy, 2008)

The primary objective of IT Service Management is to ensure that the IT services are aligned with the business needs and that it actively supports them. It is imperative that the IT services underpin the business processes, and it is also increasingly important that IT acts as an agent for change to facilitate business transformation. (ITIL V3, key element guide, Service Design, 2008)

Next let's take a glance to ITIL lifecycle modules in short.

## 4.1 IT Service Strategy

Service Strategy is there for to ensure that it is understood that IT Service Providers are in Service Business, they are providing services and therefore as in any other business area there should be a strategy behind the business. To set the targets and how to get there, vision and mission. Reason for doing it, the service business. After strategy it is time to define the services. Along with the IT service strategy, service portfolio which covers the services in pipeline, live services and terminated services is created.IT Service Design This is very important part of the service lifecycle as we know that great services does not exists in accident. All the later parts and the whole service business and management is based on the service strategy and design. In this phase service catalog is created which covers the live services and is offering catalog, kind of product catalog for the business which fore it contains all the important information regarding to services offered. Service catalog consists of different parts and the most important part is the business catalog part, how does these IT services support the business services and processes. In addition there should be IT service catalog and could be product or service catalog for end users which is then supporting the automation.

#### 4.2 IT Service Transition

Service Transition is there to ensure that both large and small scale changes are handled and taken care of controlled manner. Service transition policy is a key for to understand the idea of this lifecycle element of ITIL V3:

ITIL V3 states that realizing expected value customers can only realize the expected value from something that is fit for purpose and fit for use. Following policies are key for Service Transition:

- 1. Implementing all changes through Service Transition
- 2. Adopting a common framework and standards
- 3. Maximizing re-use of the established processes and systems
- 4. Planning release and deployment packages
- 5. Assuring the quality of the new or changed services
- 6. Proactively improving quality during Service Transition

(ITIL V3, Key Element Guide, service Transition, 2008)

## 4.3 IT Service Operations

Service Operation is about the live services, services provided for the customer. Service operation is the live service, how it is supported and maintained. How all the designed and transitioned parts of the service are taken care of in practice to fulfil the customer expectations and requirements.

## 4.4 IT Continual Service Improvement

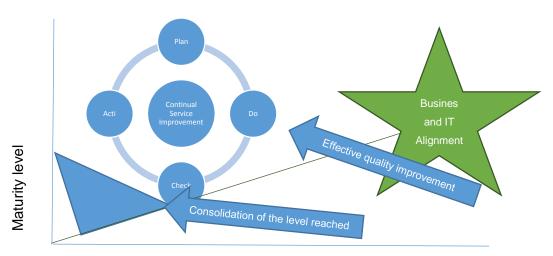
This is very important part of IT Service Management and this is running through all the other phases of IT Service lifecycle. Continual service improvement (CSI) is there to create added value to seek places to improve in continuous manner. This is the heart of service management to understand that services are there to fulfil the customer expectations and customer needs to make customer happy. Therefore we know that even if everything are going well, in the business world we need to prepare for the future and world and especially business world evolves in continuous manner. This is the place together with service operations to be close to the customer and really offer services they are looking for and even better.

Few more words about continual service improvement, there is Deming Cycle (W.Edwards Deming) introduced for CSI as a tool for quality improvement. The basis of this cycle or circle are the following stages:

- 1. Plan
- 2. Do
- 3. Check
- 4. Act

After which, a phase of consolidation prevents the circle from rolling back down the dill (ITIL V3, Key Element Guide, Continual Service Improvement, 2008). This cycle is utilized for to continuously seek places for improvement. It is said that you cannot manage what you do not measure so one important part of service management is to measure and monitor. Denim Cycle's Check can be considered as this activity and Act is standing for improvement. Take an action according to findings.

## Continual quality control and consolidation



Timescale

Picture 4. Denim Cycle for Continual Service Improvement (ITIL V3, Key Element Guide, Continual Service Improvement, 2008)

Now we know what is IT Service Management all about but what is bimodal then? Is something similar to IT Service Management, is it one additional framework, what is it?

#### 5 Bimodal IT- what is it?

As there is emerging need for IT to be able to respond to business demand on more fast way there is no other option than to innovate and create an idea which supports this need. One very much discussed approach is bimodal IT. Bimodality is the simultaneous use of two distinct pitch collections (Wikipedia, 2015. Bimodality). Other words having or providing two modes, methods or systems (Dictionary, 2015. Bimodal). According to Gartner bimodality or bimodal IT is the practice of managing two separate coherent modes of IT delivery, one focused on stability and other on agility(Gartner, 2015. Bimodal IT). Main idea is that there is more than one way to act or serve the business as it is experienced that one way is not enough. One good example is software development where there has been two different ways for already some time, one is waterfall methodology for projects and one is agile methodology where waterfall concentrates to secure each phase by having enough iterations, testing and reviews and agile mode is more fast and flexible. Agile mode concentrates to produce and deliver smaller amount of changes in more fast manner, in weeks rather than months or years.

Much has been also discussed about IT organization where there is of course need to secure the business continuity and IT system availability but at the same time be innovative and proactive on supporting the business and business development. In short bimodality is the word for doing things in more than one way, have options available for different level of needs.

As Gartner defines it, Bimodal IT is an organizational model that segments services into two categories based on application requirements, maturity and criticality. "Mode 1 is traditional, emphasizing scalability, efficiency, safety and accuracy. Mode 2 is non-sequential, emphasizing agility and speed. To keep it short we call these modes hereinafter stabile and responsive modes. (Gartner, 2015, Bimodal IT Lydia Leogn)

This is bimodality, but why the term seems to be on every CIO's lips at the moment? What is there for IT?

#### 5.1 Why is Bimodal IT so much discussed at the moment?

IT world is changing rapidly and in continuous manner. All the time something new is developed and also older existing items are renamed if recognized to be useful again. Bi-modal seems to be answer for IT to better serve the business. It is a way of delivering IT and it is heavily advertised for company CIO's (Chief Information Officers) by Gartner.

Gartner promotes the idea of Bimodal IT to CIO's is to help them see that it can be dangerous trying to optimize processes, human resources, infrastructure, and tools to cover such different modes, and as a result, optimizing to neither. It is much discussed that the required change is big and it touches the whole organization and this change should be planned, designed and implemented in a formal way not only change something a bit and think that now have two modes and we are completely compliant with all the current needs again. Anyhow this work will not emphasize the other needs than what is related to IT Service Management but also this area should change and should be able to support the two modes of IT delivery. But to be able to change there is need for organizational support so that there will be organization and resources to support the two modes of IT Service delivery.

Another way to understand bimodal IT, of course, is that Gartner has decided that traditional enterprise IT can't change enough or, at any rate, change fast enough, to meet what's it being asked for. (CIO.com, 2015. Bimodal for CIO's)

Bimodal IT seems to be a subject of IT leaders these days. Everyone are seeking the opportunities it offers to be able to respond to growing pressure from business to be more fast, more agile.

It can be thought that bimodal is just a new buzzword for old concepts and IT analysts are like fashion designers, always searching for something new, even if that means recycling age-old concepts in new terminology. But like successful fashionistas, IT leaders need to stay on top of the latest trends if only to be prepared when the CEO comes back from an industry conference full of questions.( Kurt Marko, 2015. Bimodal )

It seems that it is about two modes of responding to business needs or two modes of delivering IT. It would be good to take a closer look for those two modes.

#### 5.2 Two modes and the difference between them

The difference between these two modes must be described in more detailed way. We can call these now as traditional and safe way and new more agile and fast way of delivering IT Service Management. If we think about more traditional legacy system which is not much developed but need to run smoothly and is mandatory to be available and the continuity has to be secured. For this kind of system there is need to exists very comprehensive processes and practices of how to manage the system in operations and how to support and maintenance the system in the way that the continuity and availability is secured. One main characteristic of this kind of system is that it is supporting the core business processes like for example SAP for Finance and Accounting. Traditional and existing IT Service Management processes are traditionally designed to support the systems like this but what to do when there is need to support completely different system.

Mode two system could be some kind of small cloud service which is changed and developed in continuous manner in agile way and the production is in so called DevOps mode (Gartner, 2015. Bimodal IT Lydia Leong). Definitely this kind of fast mode application cannot be supported by slow and bureaucratic processes which are perhaps securing the continuity but are slowering the delivery of the changes with no reason. This is the main reason why we need two modes of IT Service Management, we need to be able to support these lighter DevOps applications which again are supporting e.g. emerging businesses. In the below picture there is a clear separation of those modes of IT and between is the items which needs to be taken into consideration when going towards bimodal IT.

#### Implication - IT moves to a bimodal organization Mode 1 Mode 2 Reliability Goal Agility Price for Revenue, brand, Value performance customer experience Waterfall, V-Model, Agile, kanban, low Think Approach ceremony IID Think high-ceremony IID Marathon **Sprinter** Runner Plan-driven, Empirical, continuous, Governance approval-based process-based Enterprise Small, new vendors, suppliers, long-term Sourcing short-term deals deals Good at Good at new and Talent conventional uncertain projects process, projects IT-centric, removed Business-centric, close Culture from customer to customer Cycle Times Long (months) Short (days, weeks) Gartner.

Picture 5. Mode one vs. mode two (Gartner, 2015. Bimodal IT Pictures).

Now we know what is IT Service Management about and what is this very interesting subject called bimodality. What would we then get out of it? Would there be something for IT Service Management? Some tool or some way to be better IT Service provider or perhaps not better but the best?

#### 6 Review of related work of bimodal IT

There is not much about bimodal IT Service Management but if reading about IT service management you can definitely refer to bimodality as an idea and there is definitely no contradiction between those two or at least no barrios to utilize both in a great manner. Is there existing bimodal IT Service Management or not, this cannot be said but certainly there is possibility to create one. Does it require two different and parallel processes and practices, if bimodal then at least on some level yes but perhaps not covering all the processes.

Subject Matter experts where interviewed from two different companies for benchmarking purposes. Results of the interviews were that bimodality is not yet recognized in a way of IT delivery or operations. It seems that it is coming and it is under evaluation but companies are not yet there.(Appendix 2).

But within the world of bimodal IT, we have ended up with 'two-speed ITSM'. This is about the challenge of IT service management trying to modernize, innovate and be more responsive while still getting ITSM professionals to do the basics well. The perception of ITSM is also an issue: even people working in IT tend to think about ITSM as being only service and support; in fact, it's much more about service and value than just help or break/fix.(Axelos, 2015. Two speed, bimodal ITSM)

IT Service Management is there to define the services and categorize the services e.g. prioritization. This helps then to operate and manage services according to their priorities and requirements in more efficient way where only one tool is bimodality. This service categorization and prioritization provides opportunity to concentrate to what is most important, concentrate to where the improvement is mostly needed and concentrate to support the ways that is fit for purpose and fit for use. Focusing only on the technical elements is a last-century approach; delivering IT and ITSM in the round now requires commercial, financial and contractual nous as well as excellent communications and relationship management. (Axelos, 2015. Two speed, bimodal ITSM)

In the past, many companies had a single strategy for selecting, deploying and managing applications. They may have had methodologies for classifying applications by value or technological viability, but they did not recognize that applications are fundamentally different based on how they are used by the organization.(Gartner, 2015. Bimodal IT 2)

Going toward bimodal IT service management we need to align the IT Service Management best practices ITIL and bimodal framework. Again something not new at all we need to be close to the business. If really like to challenge why not to remove the term "IT" we

are all doing the business or supporting, enabling or creating it. When defining and categorizing services it cannot be done in isolation it has to be done in collaboration with business. At the same time it is important to understand where the organization is and what are the issues with IT Service Management, where to improvement is needed. When services are considered and planned or reviewed the one vital part is sourcing, there are different options for this and it is a matter of need of which one to choose. When the environment becomes to be multivendor environment there is need to consider the Service Integration and Management not only Service Management but in addition the integration(Governance of UK, 2015. SIAM).

This can succeed only with an organizational change program to make sure it actually happens, rather than just training that is just ticking a box. Change program doesn't need to be massive and onerous - these can be quick and effective using some of the 'new' techniques like agile and DevOps - so the opportunity is there to meet the two-speed challenge with two-speed ('traditional and new') thinking.(Axelos, 2015. Two speed, bimodal ITSM)

These discussions have also given rise to questions such as "is ITIL still relevant" especially in the second more agile mode. Another intersecting theme is the role of automation in change and release management. Along with automation comes the need for more standard changes with expedited approvals and smaller change and release packages.(HP, 2015. Bimodal ITSM)

If one approach is leading to organization change would there be lighter way to create bimodal IT Service Management at least partially? Could we just be more fast and agile on some parts or the parts where it is most required? Let's think about few possibilities:

- Agility, improved and enhanced service for end-users: To stay relevant, the service desk has to provide an engaging, relevant, and even proactive experience. Service Desk has to be more intelligent it would not be enough anymore to be one additional layer which is only assigning requests to correct places.
- Common tasks and defined tasks to be automated and in user friendly way.
- Agility for process owners and analysts and this is at the core of the "Is ITIL still relevant" question. Many management processes are considered too heavy, too static, and require too much effort to

modify and maintain. Process owners and analysts need new levels of insight and easy and effective of ways of improving and accelerating processes. (Axelos, 2015. Two speed, bimodal ITSM)

Idea is to categorize the services and classify mode 1 and mode 2 applications and create fit for purpose operations to support both modes (appendix 5).

## 7 Bimodality in ITIL

Bimodality is term for two different ways of IT delivery. ITIL is a set of best practices for IT service management. Logical way to study the bimodality in ITIL is to take a closer look to ITIL module by module.

#### 7.1 Bimodality in IT Service Strategy

We can definitely support the idea of bimodality by studying ITIL V3 where it is also stated that primary objectives of Service Strategy can be summed up very simply: "Provide superior performance to competing alternatives" (ITIL V3, key element guide, Service Strategy, 2008). There is also reference to bimodality way of thinking as ITIL is describing the two ways of providing IT services.

First approach is kind of manufacturing type of service delivery where the company is looking after more and more efficient and effective ways of delivery and scarcity is a fundamental problem. Main aim is to create greater value with minimum resources no matter whether is about floor space or computing capacity. But again thinking about the customer and the customer business. Another way is marketing type of service approach where the key is on fast response, fast action, capability to capture hidden non articulated needs. The second way is very customer centric which is looking after to really understand the customer current and future business needs. (ITIL V3, key element guide, Service Strategy, 2008)

It is said that the challenge with information-based technologies is that they are seldom perceived as services by IT management, and hence not designed and managed as services to customers. Instead, they are managed as administrative routines with internal efficiency and costs as the main criteria. Moving into the role of a service provider is a powerful way of setting apart the IT organization from its competing alternatives. (ITILV3, key element guide, Service Strategy, 2008)

ITIL is describing the two ways of responding to customer business needs the more traditional responding to requests and more ad hoc and innovative when proposing business with new opportunities. Main idea, no matter what is the way to provide IT or services, is to create value for business.

Value creation: utility and warranty. Services create value in many ways, frequently intangible but nonetheless real. The value may take many forms. How useful is it? How reliable

is it? What is its quality or reputation? These questions can only be answered by customers. In other words, value is defined by customers, not the service provider. This understanding begins with simple questions:

- What is our business?
- Who is our customer?
- What does the customer value?
- Who depends on our services?
- How do they user our services?
- Why are our services valuable to them?

(ITIL V3, key element guide, Service Strategy, 2008)

These questions might also help when designing the bimodal IT Service Management framework as the ultimate goal is always customer or customer business.

#### 7.2 Bimodality in IT Service Design

When bimodality is providing services in two mode ITIL concentrates to provide IT services which are designed to fulfil the customer business needs no matter what is the mode or how many modes are required.

As it is said that great services do not exist by accident. They have to be carefully planned and designed. ITIL Service Design is the means to achieve this. The best Service Strategy cannot be realized without well-designed services. Effective Service Design can lead to organizations to greater gains in quality and cost-effectiveness. It reduces the risk of costly compensating for design flaws in the operational environment, and ensures that services will perform as they are intended and bring measurable value to the business objectives. (ITIL V3, key element guide, Service Design, 2008)

Definitely when planning to deploy bimodal IT Service Management the most crucial part is to start already on service design phase and align with service strategy. Means of service design is to design the service to fulfil the customer business needs, this means that there is no contradiction between ITIL and bimodality, other words bimodal IT services can be very well designed by utilizing ITIL framework if those are designed to respond to business needs. If business demand is varying between quality, reliability, flexibility, cost efficiency etc. with bimodality we can design different methods which are supporting different combinations of business needs but because there should not be limitations to only

two modes of service mgmt. we need to keep eyes open also for further demands.( ITIL V3, key element guide, Service Design, 2008)

When going towards to changing or creating new IT services it is important to carefully analyze of course the need and the business case but also service solutions, service management systems and tools, architectures and management systems, measurement systems, methods and metrics and processes needed. Holistic approach is recommended to ensure that all the aspects are taken care of when designing new service. Again it is important to evaluate that what is the required level of design activities, not all small changes requires all the planning and design items to take further, again bimodal ways of delivery can be utilized when designed.

## 7.3 Bimodality in IT Service Transition

If we think about the IT Service Transition which starts after service design the goals of Service Transition are:

- Set customer expectations on how the performance and use of the new or changed service can be enable business change
- Enable the business change project or customer to integrate a release into its business processes and services
- Reduce variations in the predicted and actual performance of the transitioned services
- Reduce the Known Errors and Problems and minimize the risks from transitioning the new or changed services into productions
- Ensure that the service can be used in accordance with the requirements and constraints specified within the service requirements

(ITIL V3, key element guide, Service Strategy, 2008)

Again Service Transition is established to manage resources to establish successfully a new or changed service into production within the predicted cost, quality and time estimates, ensure there is minimal unpredicted impact on the production services, operations and support organization, increase the customer, user and service management staff satisfaction. Always the main idea is the customer, customer service and customer satisfaction.

Many times ITIL is considered to be bureaucratic and hard to understand, complicated way of managing services and no added value is seen to be existing. It seems that in these cases ITIL is understood wrong as the main idea of the whole framework is to cre-

ate value for business and secure the customer satisfaction. There is no contradiction between ITIL or other industry frameworks nor with bimodality rather is bimodality a new buzzword for the practices what ITIL is already supporting and proposing.

#### 7.4 Bimodality in IT Service Operations

What does the ITIL say about service in operation then: "The purpose of Service Operation is to coordinate and carry out the activities and processes required to deliver and manage services to business users and customers at agreed levels. Service Operation is also responsible for the ongoing management of the technology that is used to deliver and support services. Well-designed and well-implemented processes will be of little value if the day-to-day operation of those processes is not properly conducted, controlled and managed. Nor will service improvements be possible if day-to-day activities to monitor performance, asses metrics and gather data are not systematically conducted during Service Operation.

The scope of Service Operation includes the management of Services, Service management processes, Applications, Infrastructure, Facilities and People. Service Operation is responsible for executing and performing processes that optimize the cost and quality of services, enabling the business to meet its objectives, and for the effective functioning of components that support services. (ITIL V3, key element guide, Service Operations, 2008)

Main idea is that how the services are delivered so that the business is gaining most out of it. It is not said exactly how the processes should be defined, the best practices are introduced to support the companies to create their own processes and practices which are most fit for purpose and fit for use.

Let's present the key elements which cut across all aspects of ITIL Service Operations, and influence the way that services are delivered.

- Providing service, all service operation staff must be aware that they are
  there to provide service to the business. Staff must be trained not only in
  how to deliver and support the IT services, but also the manner in which
  services should be provided. Staff training and recruitment must consider competency in a service-centric focus toward customer relationships and interactions, as well as in technical competencies.
- Operational health by comparing the monitoring and control of service operation. Operational health is determined by identifying vital signs that are critical for the execution of a vital business function. If these are within normal ranges, the system is healthy. This approach leads to a reduction in the cost of monitoring, and enable staff to focus on areas that will lead to service success

- Many things that are needed during service operation are in conflict with each other. Service operation has to deal with these conflicts and provide a balance between conflicting priorities
  - 1. Internal IT view versus external business view. IT can be seen as a set of services or as a set of technology components (internal IT view). Both views are essential to deliver services. An organization that focuses only on business requirements will make promises that cannot be kept and an organization that focuses only on internal systems will have expensive services that deliver little value.
  - 2. Stability versus responsiveness. Service operation must ensure that services are available. IT must also recognize that business and IT requirements change. Each change brings an opportunity to provide better service, but carries risk to service stability. An organization that focuses only on stability may be poorly aligned with business requirements, leading to poor customer satisfaction. An organization that focuses only on responsiveness will provide poor service availability and may spend too much on change.
  - 3. Quality of service versus cost of service. Service operation must deliver the agreed level of service to customers and users, while minimizing costs and resources. Determining the appropriate balance is part of Service Strategy and Service Design, but, during Service Operations, decisions about ongoing costs and quality must be made. Too much focus on quality will result in services that deliver more than necessary, at a higher cost. Too much focus on cost will result in IT delivering on, or under, budget, but putting the business at risk through sub-standard services.
  - 4. Reactive versus proactive. A reactive organization only acts when it is prompted by a driver. A proactive organization always looks for ways to improve. Proactive behavior in Service Operation is generally good, but reactive behavior is sometimes needed. Too much focus on reactive activities will lead to poor service quality, due to a failure to plan for likely eventualities and to learn from experience. Too much focus on proactive activities will result in overspending, and slower response to serious outages.

This is all in idea level but we can clearly see that it would be not only a good but great idea to develop IT service management to more support the business needs, to be more flexible, agile and fast when needed but on the other hand secure the continuity and availability when needed.

ITIL is providing set of processes and practices which can be utilized as a tool set but if the IT processes and practices are already existing it is also good and there is no limitation to develop two ways of IT Service Delivery other words bimodal IT service operations e.g. by creating more fast and light mode (responsive way) change management process to support DevOps type of services and more comprehensive and secure (stabile) mode change management process for systems supporting the core business processes.

## 7.5 Bimodality in IT Continual Service Improvement

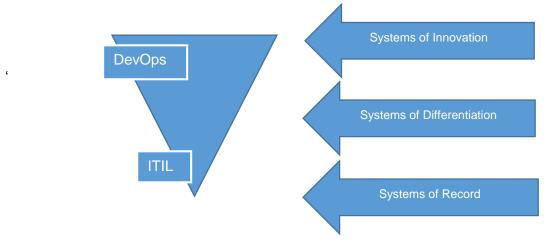
Continual Service Improvement as mentioned earlier is a systematic way to seek places to improve in continuous manner. This set of practices is the one that is most marketing friendly and can be advertised to create value for business. Ultimate goal for CSI is to create value for business and look for places to be more efficient. This would therefore be the most important tool for bimodal IT Service Management together with bimodal framework. Together with continual service improvement it could be natural and effective to way to deploy the bimodal IT Service Management framework where CSI would provide information on what to improve and change and bimodal IT service Management framework would give the tool design the improvements and changes in other words guideline on which level of change or improvement is suitable for each service.

Again ITIL is not limiting what to measure or how, it is just introducing the best practices that we should set the targets on what to measure and we should monitor and measure for to be able to manage and for to be able to improve. Bimodality could be even a finding on service management CSI, define place to improve to be able to better serve the business and emerging businesses.

## 8 A Tool for Bimodal IT Service Management Transformation

When seeking the way closer to bimodal IT Service Management there must be a way of doing it. One possibility is to utilize Gartner Pace layering methodology. Gartner says adopting a pace layered application strategy can accelerate innovation. Special Report Shows Pace Layers Can be Used to Build a Business Application Strategy That Delivers a Faster Response and a Better ROI. (Gartner, 2015. Pace Layering)

Even though the pace layering has three different layers it can be utilized as a basis for bimodal IT. If bimodal IT stands for delivering services in two modes, pace layering is categorizing applications behind the services in three different categories. These categories are recognized from the real life to exists and should be therefore linked to applications. Pace layers and bimodality are two different things but are targeting to the same, both are there to fulfil the business needs. Even bimodal could be more than two modes but of course to keep it simple better to define two modes from existing one and then go further if the need is recognized. Following picture illustrates the linkage between the pace layers and bimodal IT:



Picture 6. Systems of Innovation applications are more DevOps style responsive application services where Systems of Record are very standard way processed stabile application services. Systems of Differentiation applications are in between the two and moving towards Systems of Record. It still does not mean that it requires one additional mode for service delivery, it is more to describe the stages in application lifecycle (Picture by Author).

IT leaders and application leaders should use Gartner's Pace-Layered Application Strategy to differentiate the business and drive innovation. This research reviews the pace-layered tools and the best practices that IT leaders need to implement a successful pace-layered strategy.

Gartner has tools for bimodality which stands for two speed IT, two modes of IT delivery. Tools are called pace layering which helps to set up a supportive delivery frameworks for both mode. (External Subject Matter Expert was interviewed see appendix 1)

Pace layering is based on the different pace of IT delivery other end is DevOps world which cannot work with very bureaucratic processes and practices ITIL and other end is full ITIL world where all the required operational processes are up and running and everything if formalized and controlled. DevOps end does not mean that there is no processes, or controls at all but those are more lighter way established to more support the required agility, flexibility and fast mode of delivery. (External Subject Matter Expert was interviewed see appendix 1)

Pace Layering has three different modes described as follows:

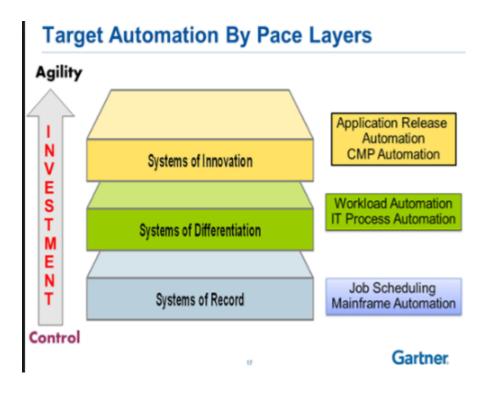
- •Systems of Record Established packaged applications or legacy homegrown systems that support core transaction processing and manage the organization's critical master data. The rate of change is low, because the processes are well-established and common to most organizations, and often are subject to regulatory requirements.
- •Systems of Differentiation Applications that enable unique company processes or industry-specific capabilities. They have a medium life cycle (one to three years), but need to be reconfigured frequently to accommodate changing business practices or customer requirements.
- Systems of Innovation New applications that are built on an ad hoc basis to address new business requirements or opportunities. These are typically short life cycle projects (zero to 12 months) using departmental or outside resources and consumer-grade technologies.

These layers correspond to the notion of business leaders having common ideas, different ideas and new ideas. The same application may be classified differently in one company than in another, based on its usage and relationship to the business model. It is expected to see applications move among layers as they mature, or as the business process shifts from experimental to well-established to industry standard. (Gartner, 2015. Pace Layering)

When utilizing pace layering it is not enough to categorize only applications but thrill down to the business processes the applications are supporting. This is also very much aligned with ITIL Service Design best practices where the service catalog is designed to support each business service and business processes which in practice means that one IT service can support several business processes.

For example, financial accounting, order entry and collaborative demand planning are often part of a single ERP package, but are separate application modules that belong in three different layers in the Pace-Layered Application StrategyThis approach should also be used to classify individually packaged or custom-developed applications. It is important to determine whether they support a common requirement, a unique business methodology or an innovative new business process.( Gartner, 2015. Pace Layering)

Now if and when utilizing the pace layering as a tool it is important to reflect it against the service portfolio. A difference between service portfolio and catalog is that portfolio covers also services in pipeline and retired services in addition to live services. Companies are looking after the development on IT creating more value for business therefore it is important to concentrate to the processes and practices but also to data integrity in all levels of pace layering. Gartner is providing a set of guidelines and requirements for each layer which should be integrated to service architecture and design.



Picture 7. Options for pace layering (Gartner, 2015 Pace layering Picture )

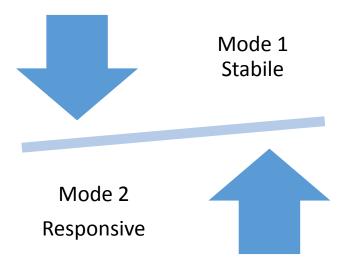
## 9 Bi-modal IT Service Management Framework

This framework is created based on Gartner bimodality theories and ITIL best practices. It is stated by Gartner and by ITIL Service Strategy module that in these days there is need to align with business and serve the business needs in most fit for purpose way. This means in practice that there need to be two different modes of operations to serve the more traditional business critical systems where availability and continuity are crucial for the business continuity and success and, in addition, the more ad hoc business needs that are supporting the rapidly changing business requirements where it is crucial to act and change fast to be able to secure e.g. time to market targets.

There are two modes in bimodal IT Service Management, two modes to serve the business with existing and new services.

**Mode 1** is traditional, more reliable mode for securing the continuity and availability, in other words stabile mode.

**Mode 2** is new and innovative mode for agile and flexible, more fast service delivery, in other words responsive mode.



Picture 8, Two different modes of IT Service Management (Created by Author)

#### 9.1 Bimodal IT Service Strategy

It service strategy is important as the strategy always is. It gives the reason, justification and direction to go. It gives everyone a reason of why we are doing this as also many times hints for how we are doing this.

Bimodal IT Service Strategy creates idea to provide services in bimodal way and reason for doing this. To have good bimodal service strategy it is essential to create something hard to replicate and something with competitive advantage.

What is important when creating the bimodal IT Service Strategy is, of course, understand the markets, what would be the desired position there and then what are the advantages on the markets. Advantage created with performance and capabilities. This is also why it is so important to create comprehensive service portfolio which then supports the innovation of finding the differentiation opportunities. Bimodal IT Service Strategy is there to serve business in more attractive ways. Target for the bimodal IT Service strategy is to enable services which are better serving business. Strategy level is also the level where the decision is made either to proceed with the bimodal service management or not. Following thoughts has to be clarified for to proceed:

- 1. What is our ultimate goal?
- 2. Where do we want to be as IT service provider?
- 3. What do we want to achieve with bimodal IT service management?
- 4. What capabilities and services are required for this?
- 5. How to get there?

When the strategy is there and the goal set it is important to also analyze where we are now (current state) to be able to set the activities for how to get there (future desired state). Main points to create by Service Strategy are following:



Picture 9, Main modules in IT Service Strategy (Picture by Author)

#### 9.2 Current state analysis

To be able to develop something there is need to understand the current level, sometimes in very comprehensive levels and sometimes not. Now when our target is to develop bimodal service management and ultimate target is customer business needs the study is starting from the services we are providing for business.

Current state analysis can be divided to parts e.g according to business functions or one part of one business function. Anyhow the key is to start with current state analysis. Most important is to understand the business and business processes and IT applications supporting and enabling these processes as IT applications are provided as services for the business. Steps to take:

- Nominate the person accountable and responsible for this activity.
   Correct type of skills are required to be able to justify the activity and questions. Required skills are:
  - a. IT portfolio knowledge and enterprise architecture knowledge as also Service Management and application architecture knowledge.
- 2. Utilize the attached excel "Current state analysis, appendix 5"
- 3. Fulfil the excel in close cooperation with business and IT specialists in this particular area or areas.
- 4. Concentrate to gather information of the current business processes and connect with IT applications supporting the business processes.

As part of the current state analysis there is need to classify the existing services. This classification helps to understand the current state.

## 9.3 Selecting the mode of the Service or Application

After all IT applications or piloting applications are captured and linked with business processes there is need to classify the applications, applications are part of services. This can be also parallel when capturing the applications for to be more efficient. Application classification can be done by utilizing the "Current state analysis, appendix 5". For the application classification we are utilizing Gartner's Pace Layering tool kit by creating own version of it.

#### 9.4 Bimodal IT Service Design

When the current state is captured it is time for the very important part in this exercise, service design. Services needs to be designed to best serve the purpose. This design will represent the desired state of bimodal service management. In bimodal service management we will create the service model where we define the required changes for each service covering the people, processes and tools.

Service design covers following parts:

## 1. People

a. We need to ensure there are best suitable skills and competences available for each service in it's own mode. Here we can utilize internal and external competencies.

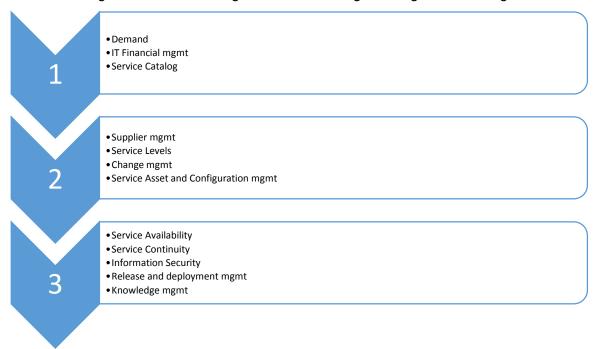
#### 2. Processes

 a. We need to ensure that the processes, roles, responsibilities and skills can operate and support the services in both modes.

#### 3. Tools

a. We need to ensure that our tools are consistent and can manage the services in each mode.

Bimodal service design ensures that the service portfolio and catalog are consistent and build for business capabilities. Service catalog provides information on which mode the service belongs to. All the following needs to be thought during service design:



#### 9.5 Bimodal IT Service Transition

Bimodal service transition ensures that the required changes are implemented for the new or changed service but in addition service transition could also be bimodal and support the different customer needs. Existing IT Service Transition methods and checklists can be reviewed to find bimodal way of moving the new or changed service into production. Secure mode can go thru all the required checkpoints covering documentations, approvals, activities etc. and the fast way can set the new more lighter check list for the light mode service transitions where everything what is mandatory has to be done but there can be more lighter ways to conduct the activities. Service transition concentrates to the following points:



Picture 11, Main modules of IT Service Transition (Picture by Author)

## 9.6 Bimodal IT Service Operations

Service Operations is there to ensure effective and efficient fit for purpose service delivery for business. This we can call very important part of customer service together with continual service improvement. Bimodal service operations provides two modes for operating the services in more efficient way, to secure the continuity and reliability for some services but at the same time ensure agility and fast response times for other services.

### Bimodal IT service operation processes:

- Service request management service requests are predefined and sometimes
  preapproved requests so it is important to understand the bimodality and the service class when the request is defined. Service requests are close to customers
  and it is recommended to design and define the requests in close cooperation with
  the customers.
- 2. Incident management is so important part of service management and the definition of the Incident management already is to restore the service as soon as possible that there is not much room for two different modes where other is more fast. More important is to prioritize the services in comprehensive manner so that the prioritization of critical business application related Incidents is more straight forward and serves the need.
- 3. Problem management is important part of service management which is supporting the continual service improvement as also proactive service management. There are two ways of problem management reactive and proactive where proactive could be utilized in more greater manner for mode two services. Most important is to define when the problem management is triggered and what is the business case.
- 4. Change Management as part of service operations could and would be the most obvious part for requiring two different modes of delivery. Again classification of services is important basis for this activity which after there can be developed different modes of change management for more fast change mode and for more secure change mode. Places to consider are the time for change cycles, approvals and checkpoints for each change, size of the change, criticality of the change and impact of the change. Most important part of the change management is the categorization, definitely there is no one way to serve all the needs. In service operations we manage following items:



Picture 12, Main modules of IT Service Operations (Picture by Author)

## 9.7 Bimodal Continual Service Improvement

Continual Service Improvement is the key element on ensuring that the service is on correct class and on finding the new opportunities for bimodal service management in order to serve the business in even more efficient way. Continual service improvement consists of the following parts:



Picture 13, Main modules of IT Service Operations (Picture by Author)

### 10 Case Study of the Framework

Framework was piloted with UPM. Process started already after the project plan for this research study was created. Workshop with IT process management team and IT service and Project Portfolio team reviewed the subject and proposed new viewpoints regarding to bimodal IT Service Management (Appendix 3). As a result of the workshop decision was to start the project, create a theory of Bimodal IT Service Management and framework for it.

After the research study was ready and framework (appendix 4) created it was reviewed with UPM IT Management (appendix 9 and appendix 6). Framework was commented and approved. Next steps was agreed to proceed with a UPM case study (appendix 7).

After the decision to proceed with the case study the scope (appendix 8) was agreed see appendix 9 which after the framework and scope were reviewed again with the ITSM process management team, also it was agreed to start the case study by Interviewing the key stakeholders and by categorizing the chosen services and applications (appendix 9).

Key Stakeholder interviews were conducted see appendix 9 and applications were categorized (appendix 8). The results of Service Owner and Architect interviews were then work shopped with UPM IT Process Management team and proposal for development was created as a result (appendix 7).

#### 10.1 Initial Feedback

The whole study has raised interest inside UPM IT. People want to provide input and comment on the idea. Framework proposal got positive feedback and comments. The curiosity is in high level to know what kind the development proposal from the case study will be. Feedback was also that in any case this study is beneficial for UPM as the bimodality is part of IT strategy. Even though there wouldn't be any actual development elements it is good that the subject and possibilities were researched. Also key stakeholders who were interviewed were saying that this study is so welcome and parallel activities are already ongoing so these should be definitely combined as soon as possible (appendix 9).

### 10.2 Suggestions for further development

As a result of the case study a high level roadmap was created with development proposals. Proposal is also to continue utilizing and developing the framework which leads towards bimodal IT Service Management (appendix 9 and appendix 10).

### 11 Conclusions

IT was found out that there is no contradiction between bimodality and IT Service Management rather it is new way to boost the well known IT Service Management framework ITIL. What is bimodal IT? Is it something new and why it is so much discussed at the moment in IT world? Bimodal in overall seems not to be much new but rather a methodology and a package of tools to take the IT closer to business and to be able to create more value for business. Because of the currently ongoing digital business transformation Gartner's bimodality has taken it's way to be hot topic on the field of IT.

Bimodality in IT Service Management and its relations to ITIL. Is ITIL only for traditional 'systems of record' type of IT or is it also serving fast changing environments? Bimodality brings opportunities to develop the IT Service Management to create more value for business. Examples of the development are more fit for purpose processes where all the additional bureaucracy and lead time is removed and where the processes and practices are developed to serve stability together with responsiveness. This means in practice that some processes are securing the business stability but at the same time there should be processes which are supporting also responsiveness towards business against fast changing business requirements. Key affecting factor is the business impact. Reactions can be faster when the business impact is lower.

How should the bimodality be visible in UPM IT Service Management, what changes it requires e.g. in organization, processes etc.? As a result of the case study there are few major findings; IT Processes need to be supporting the two modes of IT service delivery, processes for securing the stability and processes for ensuring the responsiveness against business. Main processes which requires the change were recognized and are service demand management, service transition management, continual service improvement and some of the service operations processes like service request mgmt., Incident mgmt. and change- and release mgmt. These processes requires simplification and transparency in addition for mode 2 flexibility and fastness. In addition it is important to develop the tools to support these requirements and take people into consideration. It is not enough to deploy the technical changes but also create an urgency for change and involve people for to be able to gain commitment and achieve a successful change.

Development proposal was reviewed with UPM Service and Project Portfolio Manager Jari Ilmonen who owns the work package for IT service management development. Feedback from him was very positive. He said that: "We have been able to define the two modes of

IT Service Management. First step has been taken towards bimodal IT Service Management and we have found the way to categorize our services and applications. We know where we are going and people were already involved to the process and are already willing to commit. UPM IT strategy supports the bimodal IT service management and there is window to opportunity existing already.

Value was created already by challenging the existing processes. And there are concrete findings to develop and improve the processes. Value was also created by recognizing the need to develop the user experience which needs to support the agile mode of service development and the more responsive IT service operations. For sure we are going to take these findings and include to our ITSM development roadmap. Create new processes and practices according to mode 2 but in addition improve the existing mode 1 processes and practices. Simplified service management for UPM IT management, closer to be not so complicated. Targeting that everyone at UPM can understand the IT Service Management."

This study was a great learning opportunity for me. As an long term IT Service Management Expert it was great to learn something new as it always is. Something new which can be utilized to take the IT more close to the business which in the end is always the target of it.

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# **Appendices**

Appendix 1. External Subject Matter Expert Interviews (Gartner and JSM-Wakaru Consulting) - Confidential

# Appendix 2. Benchmarking Interviews (Kone and Ahlström) – Confidential

### Appendix 3. Bimodal Service Management Workshop meeting minutes

# Workshop with IT Service Management team and IT Process Management Team 5.10.2015

#### **Notes**

**Participants:** Brigitta Suba, UPM (Test mgmt. and Knowledge mgmt. Process Manager), Timo Kaulio, UPM (Project Portfolio Manager), Adrien Lemiere, UPM (ITSM Process Management Team Lead), Jari Ilmonen, UPM (Head of Service and Project Portfolio Management), Wojciech Piestrzeniewicz, UPM (Change and Release mgmt. Process Manager).

Project plan for Bimodal IT Service Management graduation work was reviewed together.

#### Discussion on bimodal IT:

- 1. From testing point of view we need to think that what level of documentation, in which system the testing happens and what level of documentation.
- 2. From process perspective, how can we create options for processes e.g. perhaps not for Incident mgmt. but for release and change mgmt.
- 3. Business perspective and prioritization is important
- 4. How to classify and categorize, from business point of view and from technical point of view
  - a. application level
  - b. service level
  - c. business process level
  - d. etc.
- 5. Not a linear progress from systems of innovation to systems of record but more to create criteria which then to be reviewed yearly etc.
- 6. Let's create discussion board. Johanna to keep everyone up to date
- 7. Can we have some sample classification about our existing applications
- 8. Could it be that systems of innovation applications are not even listed on IT side but only in the use of business
- 9. Share it for discussion forum
- 10. what does it mean to create different processes, that are all the review or approval points required etc. How to know how to create more lean processes?
- 11. Requirement seems to be that to be able to serve business in more fast way
- 12. Internet Explorer is example of important application but not business critical
- 13. How to know whether it is business critical

Decisions: Bimodal IT Service Management study to be created and finalized as also framework created which after second review with the team before proceeding with the case study.

# **Appendix 4. Bimodal Service Management Framework**

# **BIMODAL IT SERVICE MGMT**

## 12 Bimodal IT Service Strategy

Business strategy is created as also IT strategy which of course is aligned with company strategy. IT strategy has vision and mission on how to support and enable the business strategy. IT to be a service provider is already a strategic asset for business as it is not a cost but it is a function that is delivering value and return on investment to business. Bimodal IT Service Strategy is then a next generation service strategy where the purpose is to create even more visible value for business by enabling two modes of service delivery one which is more agile and fast and one which is securing the continuity of core business processes.

To be really open the framework let's walk it thorough with an example. Hashtag is a small SAP company providing project, consultancy and continual support services for small to big companies. As mentioned their main product is SAP ERP (Enterprise Resource Planning) tools and services around it.

Hashtag has made a note that they has different kind of customer with different nature of managing the IT ERP systems. It seems that they cannot serve all the customers in the same way, especially the smaller companies are stating that they are too slow, it is taking weeks to deliver changes. Hashtag decide to try bimodal service approach.

Hashtag does not have CIO they have CEO and Head of Service Delivery who is nominated to establish the bimodal service management.

They will start with the strategy, they are evaluating whether the bimodality is the key for them.

# Guestions to be answered by top IT management (CIO, CDO, Enterprise Architect, Owner of Service Portfolio) and reflecting the business strategy:

1.	What is our goal	Hashtag: To be number one	
	as IT Service	SAP consultancy company.	
	Provider?	Providing global services with	
		local quality. Want to be close	
		to the customer and respond to	
		customer needs, customer is	
		always number one. Want to	
		respond to different levels of	
		customer requirements.	

2.	Where do we	Hashtag: Market leader on	
	want to be as IT	providing SAP consultancy ser-	
	service pro-	vices.	
	vider?	Vioco.	
	videi :		
3.	How to get	Hashtag: To be able to respond	
	there?	to different customer needs.	
		With top quality services and	
		listening to customer.	
4.	What capabili-	Hashtag: Top level SAP con-	
4.	ties and ser-		
		sultants. Service Management	
	vices are re-	experience. Flexibility and ca-	
	quired for this?	pability to serve in different	
		modes, different ways, different	
		approaches, different pro-	
		cesses and practices.	
5.	Do we need	Hashtag: Definitely different	
	more than one	modes at least 2. We could	
	mode to realize	start with two.	
	these targets?		
	those targets:		

Additi	ional Comm	nents:		

When the strategy is there and the goal or vision set it is important to also analyze where we are now (current state) to be able to set the activities for how to get there (future desired state).

Current state analysis to be conducted with the Enterprise Architecture and Service Portfolio management team.

### Steps to take:

- 5. Nominate the person accountable and responsible for this activity. Correct type of skills are required to be able to justify the activity and questions. Required skills are:
  - a. IT portfolio knowledge and enterprise architecture knowledge
- 6. Utilize the attached excel "Current state analysis, appendix 5"
- 7. Fulfil the excel in close cooperation with business and IT specialists in this particular area or areas.
- 8. Concentrate to gather information of the current business processes and connect with IT applications supporting the customer business processes.
- 9. Classify services by utilizing "Current state analysis, appendix 5"

Hashtag has nominated the Head of Service Delivery who will also take the lead role for the current state analysis.

Head of Delivery gather information of the current Services together with the Head of Sales and Head of Finance and Accounting:

Business Process	Function	Applications
Financial Management	Finance	SAP FI
	Accounting	SAP CO
Customer Relationship Mg	mt	
	Account Management	SAP CRM
	Sales	SAP CRM

Head of Delivery classifies the services by answering the following questions:

Questions for Application / Service Categorizations		Yes	No
Class 1 Traditional Service Management			
Class 2 Fit for Purpose Management			
	Supports core business processes in very standard way		
	Supports corebusiness masterdata management		
	Business processes it supports are well established and many		
	times subject to requlatory requirements		
	Business processes are not often changing		
	Does not provide unique solutions or industry specific capabilities		
	Is not developed in short and repeating cycles		
	Change impact is high		

Head of Delivery comes up with the following result:

Business Process	Function	Applications	Class
Financial Management	Finance	SAP FI	1
	Accounting	SAP CO	1
Customer Relationship Mg	mt		
	Account Management	SAP CRM	2
	Sales	SAP CRM	2

FICO systems in this case is traditional SAP ERP which is the heart of everything and the continuity and availability is number one thing. This system cannot be jeopardized in any case or situation. CRM system again is a new and very flexible cloud system which can be easily configured and developed in agile way to fulfil the customer needs.

## 13 Bimodal IT Service Design

Service design is the most important part in bimodal service management transformation. Service design ensures that classified services are designed according to bimodal requirements. Requirement gathering will be the first activity. This can be done by conducting key stakeholder interviews (service owner) to be able to map the requirement which are reflecting the business needs. Before starting the interview it is important to clarify the purpose and target of the bimodal IT Service Management.

### 4. People

a. we need to ensure there are best suitable skills and competences available for each service in it's own class. Here we can utilize internal and external competencies.

#### 5. Processes

a. We need to ensure that the processes, roles, responsibilities and skills can operate and support the services in all classes.

#### 6. Tools

a. We need to ensure that our tools are consistent and can manage the services in each class.

### Requirements

	Mode 1	Mode 2	Comments
People	Everything in	Agile and Lean	Agile and Lean
	place	competences	competences
			Trainings
			Resorcing from
			service providers
Processes	Everything in	Light mode pro-	More responsive
	place	cesses	processes, agile
			and fast
Tools	Everything in	Tool to support	Tool development.
	place	two modes, create	

newly created pro- cesses. More user	
cossos Moro usor	
Cesses. More user	
friendly tools.	

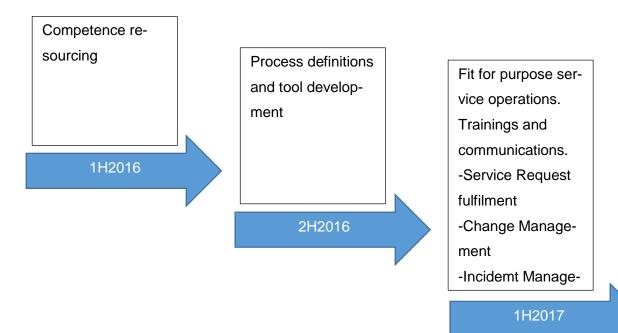
# **Bimodal Service Design Interview**

People	
Is there some changes required related to	
current skills and competences if we think	
about new fit for purpose services?	
Are the current IT skills and competencies	
covering the requirements? If we think	
about Internal IT together with all service	
providers?	
Please describe the needs?	
Processes	
Are the current processes fit for purpose	
for the bimodal service management? Ser-	
vice Transition, Service Operation and	
Continual Service Improvement pro-	
cesses.	

More agility required?	
More flexibility required?	
Please describe the needs?	
Are the current roles and responsibilities	
serving the purpose?	
colving the purpose.	
Please describe the needs?	
Trease describe the fleeds:	
Tools	

Are the current tools serving the purpose?	
Places describe the needs?	
Please describe the needs?	

# **Development Roadmap**



Set up a development project according to existing project management methodology.

### 14 Bimodal Service Transition

Bimodal service transition is created to have two modes for service transition and the new mode is the lighter and more flexible fast mode. This does not mean that it is not important to secure and control the changes but can be done in more flexible way. Main idea for service transition is to ensure that the new or changed service is transferred to production in secured and controlled manner.

When creating the light mode the following was considered at Hashtag:

- 1. More light way to set up the service environment
  - a. Tools
  - b. Support
  - c. Processes
- 2. Agree the lighter level of documentation
- 3. More lighter or not at all testings.
- 4. Automated testings
- 5. More light or not at all trainings

Fit for purpose service responsive addition to stabile could for example:

- To be set into tools at once one single and fast transaction or automated service request
- Support integration is simple and easy
- Only mandatory processes to be taken into use
- Light mode processes to be taken into use if existing
- Light mode tedtings required as it is standard out of the box industry solution
- Light mode or no trainings required as it is developed to be very user friendly learning by doing application

Service Transition is also the phase where it is always evaluated whether to retain the current mode or to switch to another. Always when new or changed service coming to service transition where the production phase is planned and secured then to evaluate the required mode.

## 15 Bimodal Service Operations

Bimodal service operations provides lighter mode of operations. In practice lighter processes to be utilized for mode 2 applications or services.

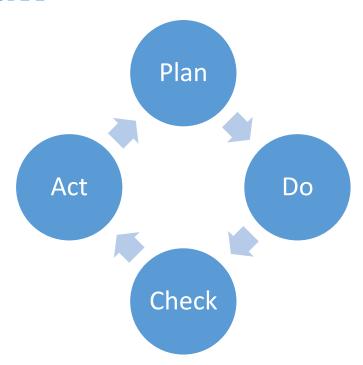
Following points were considered in Hashtag:

- 1. Is there too many authorization points?
- 2. Is the authorization in too high level, could it be authorized by one single person instead of group of nominees.
- 3. Is there pending time, where is it, could it be removed?
- 4. Is the process straight forward with continuous progress? If not could it be improved?
- 5. Does the process allow the continuous follow up, centralized place for follow up?
- 6. Is there fast enough response times?
- 7. Does the processes allow fast fix of Incidents?

#### Request Access Mgmt Incident Mgmt Change Mgmt fulfilment Process is very Process is very Process is very Process is very straight straight straight straight forward forward forward forward Automated Predefined Responsibilities Responsibilities are clear are clear and Fast Preapproved only Process is Minimun • Minimum mandatory similar for both pending time Pending time approval and modes. reviews Minimum Process is pending time flexible Minimum pending time

## 16 Bimodal Continual Service Improvement

MAIN IDEA IN BIMODAL CSI IS TO CONTIN-UOUSLY SEEK IMPROVEMENT IDEAS RE-FLECTING THE BIMODALITY. HOW TO IM-PROVE THE MORE FIT FOR PURPOSE SERVICES BUT AT THE SAME TIME THE MORE TRADITIONAL SERVICES BOTH MODE 1 AND MODE 2



Bimodal way to do CSI would be more lighter and more fast. When the place for improvement is found the mean time to deploy the improvement is short and straight forward. Roles and responsibilities are clear.

Continual service improvement can find places for improvement in any phase from strategy to service operations. All the levels has to be designed so that the improvement can take place in fast mode.

Continual service improvement relies to service management and the fact that you cannot manage what you don't measure. There for it is important to set the targets for the services according to business needs, targets that can be measured e.g. customer satisfaction. Then it is important to measure, monitor and report the results. In reporting the most

important part are the analysis. What happened, what was the cause and how can we improve. Always seeking the places to improve. Regular meetings to report and agree on improvements. Targets to commit to improve could be another metric.

Hashtag company decides to fully support and commit to continual service improvement so that it is visible everywhere in IT Service Management. Purpose is to measure, analyze and look for opportunities to improve to be more and more responsive for business. In practice this means for Hashtag that they are conducting the cycle on monthly basis and every month there is target to find one to five improvement proposals for each service. Improvement actions are projected in agile way and actions conducted on weekly level. One important item in CSI is to in continuous manner evaluate the facts behind the service applications, if the phase is changing and more stabile mode of operations is required. There the following questions will be utilized in iterative manner. In these questions the most important question is the level of change impact for the application. If the impact is high the risk to do changes is high which fore the Mode 1 needs to be considered.

Questions for Application / Service Categorizations			No
SAP FICO - Accounts Payable			
Class 1 Traditional Service Management			
Class 2 Fit for Purpose Management			
	Supports core business processes in very standard way		
	Supports corebusiness masterdata management		
	Business processes it supports are well established and many		
	times subject to requiatory requirements		
	Business processes are not often changing		
	Does not provide unique solutions or industry specific capabilities		
	Is not developed in short and repeating cycles		
	Change impact is high		
	Solution is not highly configurable with minor customization		
	Is not new and innovative small scale solution		
Impact and dependency analysis, even if support	ing core business processes can be developed in isolation!!		

# **Appendix 5. Current State Analysis**

Questions for Application / Service Categorizations					
Class 1 Traditional Service Management					
Class 2 Fit for Purpose Management					
-	Supports core business processes in very standard way				
	Supports corebusiness masterdata management				
	Business processes it supports are well established and many				
	times subject to requiatory requirements				
	Business processes are not often changing				
	Does not provide unique solutions or industry specific capabilities				
	Is not developed in short and repeating cycles				
	Change impact is high				
	Solution is not highly configurable with minor customization				
	Is not new and innovative small scale solution				

<b>Business Process</b>	Function	Applications	Class				
Financial Management	Finance	SAP FI	1				
	Accounting	SAP CO	1				
Customer Relationship Mgmt							
	Account Management	SAP CRM	2				
	Sales	SAP CRM	2				

Appendix 6. Bimodal IT Service Management Framework Proposal



### Why?



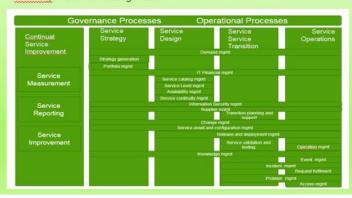
- We need to be able to respond fast in new digital business requirements
- At the same time we need to secure the continuity and availability of more traditional operations

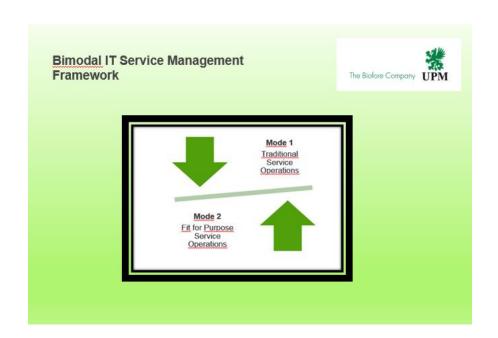


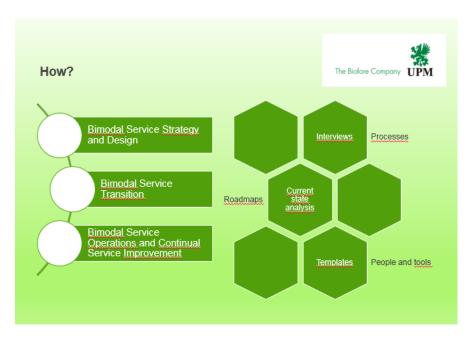
### What?



- Bimodal Service Management
  - Traditional IT Service Management vs. fit for purpose business transformation enabling IT Service Management







# **Bimodal Service Strategy**



- · Bimodal IT Service Strategy creates idea to provide services in bimodal way and reason for doing this. To have good bimodal service strategy it is essential to create something hard to replicate and something with competitive advantage.
  - What is our ultimate goal?
  - Where do we want to be as IT service provider?
  - What do we want to achieve with bimodal IT service management?
  - What capabilities and services are required for this?
  - How to get there? (as is vs. future)



### **Bimodal Service Design**



- Services needs to be designed to best serve the purpose. This design will represent the desired state of bimodal service management. Requirements gathering by Interviews.

  - People
     we need to ensure there are best suitable skills and competences available for each service in it's own class. Here we can utilize internal and external competencies.

  - Processes
     We need to ensure that the processes, roles, responsibilities and skills can operate and support the services in all classes.
  - Tools

    We need to ensure that our tools are consistent and can manage the services in each class.



### **Bimodal Service Transition**



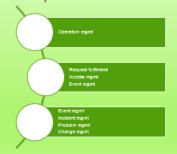
- Secure mode can go thru all the required checkpoints covering documentations, approvals, activities etc. and the fast way can set the new more lighter check list for the light mode service transitions where everything what is mandatory has to be done but there can be more lighter ways to conduct the activities.
- Fit for purpose service could for example:
  - To be set into tools at once one single and fast transaction or automated service request
  - Support integration is simple and easy
  - Only mandatory processes to be taken into use
  - Light mode processes to be taken into use if existing
  - No testings required as it is standard out of the box industry solution
  - No trainings required as it is developed to be very user friendly learning by doing application



### **Bimodal Service Operations**



Bimodal service operations provides two modes for operating the services in more efficient way, to secure the continuity and reliability for some services but at the same time ensure agility and fast response times for other services.



# Appendix 7. Bimodal IT Service Management Case Study UPM - Confidential

# Appendix 8. Current State Analysis Case UPM - Confidential

### **Appendix 9. UPM Case study Interviews**

### 16.1 Bimodal Service Management Framework proposal

Bimodal IT Service Management proposal was presented to Jari Ilmonen, UPM Head of Service and Project Portfolio Management and for Mikko Wecksten, UPM Vice President, IT Strategy and Governance 20.11.2015.

Proposal was presented and discussed also good feedback and comments received.

Mikko was saying that perhaps we need to rephrase the "Digital Applications vs. Enterprise Applications" these terms are not fit for purpose, all IT Applications are digital.

Mikko also commented that it was a good decision to take ITIL as a framework for Service Management and bimodality reflections.

Jari was very interested about the categorization as also Mikko, how the applications and services will be categorized and this was also discussed.

As a result the framework was approved and go decision was made for the UPM Bimodal IT Service Management case study.

It was also clarified that Bimodal IT is part of UPM Strategy and therefore there is strong commitment for this work.

In overall Mikko was saying that he is really enthusiastic to know the results of the case study.

Jari is saying that this work is anyway very beneficial for UPM and it is supporting the IT strategy. No matter what is the result of the study it is good that the subject is researched. Mikko strongly agrees with Jari.

### 16.2 IT Services with Applications for UPM Case Study

Services for the case study purposes were chosen with Jari Ilmonen, UPM Head of Service and Project Portfolio Management 24.11.2015. Also at the same day the framework and services were reviewed with UPM Process Management team. As a result decision to go forward with Service Owner and Architect Interviews according to framework.

### 16.3 Application Categorization

Applications were categorized together with Service Owners and Architecs during week 48 (Elina Syvänterä, UPM Service Owner, Sanna Melonen-Nyman, UPM Service Owner, Kirsi Penttilä, UPM Architect, Jaakko Jokinen, UPM Architect, Petri Nykänen, UPM Architect and Marcin Sengerski, UPM Architect. After categorization Service Owners were Interviewed according to framework templates. See the appendix 8.

# Bimodal Service Design Interview Elina Syvänterä UPM, Service Owner

People	
Is there some changes required related to	Improve the agile project mgmt. skills and
current skills and competences if we think	competences and lean service manage-
about new fit for purpose services?	ment. More trainings and information to be
	shared regarding to these subjects. Many
	times still projects are waterfall type pro-
	jects etc. More information on how to uti-
	lize these new modes or opportunities.
	Structure created, when to use and which
	process etc.
Are the current IT skills and competencies	Smaller houses and companies are very
covering the requirements? If we think	agile and scrum. Bigger companies are
about Internal IT together with all service	not so flexible. Perhaps the competence is
providers?	there but is not visible in our cooperation
Please describe the needs?	All standards and security issues to be re-
	ally straight forward and clarified to every-
	one.
Processes	
Are the current processes fit for purpose	In common the processes are not flexible
for the bimodal service management? Ser-	are not seen flexible. Issues are put to
vice Transition, Service Operation and	tube and coming out some day but the
Continual Service Improvement pro-	progress is not visible. How the process
cesses.	works, what is the progress, communica-
	tion not flexible.

	If help desk or external help desk it is not
	visible to IT.
	VIOLOTO TO TT.
	Oth an area to accompant in the dialogs above
	Other ways to support, is the ticket always
	required and could it be more fast and
	simple.
	Standard requests are working quite well.
	Users has been satisfied.
	Continual service improvement is not al-
	ways visible from service provider.
	Knowledge mgmt. are not utilizing.
More agility required?	Users requires flexibility. But provider point
Wore againty required:	
	of view everything if very agile then how to
	control everything. Visibility is the most
	concrete requirements. Visibility and
	comms regarding to progress.
More flexibility required?	Very standardized way, IT mode and busi-
	ness to follow the process. e.g. when de-
	ploying new service.
	Some business people requires flexibility
	but some for example purchase to pay
	people are satisfied that everything is
	standardized
Please describe the needs?	Startdardized
Tiedae deactibe tile fleeda?	
Are the current roles and responsibilities	Everything in place seems to work. In Fi-
serving the purpose?	nance there are in addition concept own-
	ers, addition to service owners.

	This is working well but when something is vendor related it is coming to service owner and then service manager and then Tieto.  SPOC is preferred.  Also other point of view it is not good if e.g. Tieto contacts business directly.
Please describe the needs?	
Tools	
Are the current tools serving the purpose?	Snow is bureaucratic and not easy to use.  It is not understood.
	Usability and user experience is important for business users.
	It never proposes anything , does not support usagedoes not remember you or
	how you are using the system. It should lit-
	tle bit forecast and support the usage, more modern usability. Most used.
Please describe the needs?	Release mgmt. is very complicated and not straight forward at all. So many different requirements, lots of information should be provided and existing.

**Bimodal Service Design Interview** Sanna Melonen-Nyman UPM, Service Owner, Sanna also invited Jussi Puustinen, UPM Manager for Cloud Services as she thought that he has good ideas for the study.

People	
Is there some changes required related to	Smaller mode 2 applications or services,
current skills and competences if we think	there could be only service owner no need
about new fit for purpose services?	for all different roles, service owner, appli-
	cation owner, architect, service manager
	etc. Required competence to be able to
	ensure that the required competence is
	available e.g. on service provider side,
	knows where to ask and how to solve
Are the current IT skills and competencies	
covering the requirements? If we think	
about Internal IT together with all service	
providers?	
Please describe the needs?	RACI is important, vendor to coordinate
	and consult if to do or not to do, vendor to
	take the ownership. There already are
	some areas where the vendor has the
	ownership and it is working well. Vendors
	need to think the business, have the busi-
	ness perspective.
	Vendor should have the competence and
	UPM to ensure that the business require-
	ments are fulfilled SIAM.
	E.g. if need to develop and think the de-
	pendencies, updgrades required proactive

dor sidewhat to do and when, what is there available on the markets.	
there available on the markets.	
CSI on every level	
Vendor mgmt, to really request proposal this level of services.	of
Small, mature, cloud, service owner have all the roles	<u></u>
Platform ownership. To take forward. data	
Processes	
Are the current processes fit for purpose for the bimodal service management? Faster sourcing processfail fast type of process no bureaucratic slow sourcing	f
Service Transition, Service Operation and process for small services which lifecycle	9
Continual Service Improvement pro-	
cesses. fast process.	
Release process only one very complicated one. really not fit for purpose for all services/applications.	I
If 30 minutes configuration change and r	e-
flected to release process it is definitely	
too complicated and slow, time consum-	
ing.	
What is enhancement in small type2 app cations	oli-
Flexibility. If new consultant comes who	
owns or creates the feature. If people	
changes, how it is handledno need to	
manage the who is doing	

	It has to be measured how much time it requires to update snowcompared to "real work". Amount of clickings, requirments, steps
More lean required?	
More flexibility required?	Flexibility and efficiency. Documentation yes but on which level, we did and what but not too much documentation again= not too many steps and requirements on the process.
Please describe the needs?	This study is so welcome. This needs to be combined with the another study concentrating to application categorization, it is ongoing on Cloud services side.
Are the current roles and responsibilities serving the purpose?	
Please describe the needs?	

Tools	
Are the current tools serving the purpose?	Demand mgmt
	UPM processes from the scratchGolden
	blueprint and Snow configuration was from
	the beginning very complex and bureau-
	cratic.
	Business does not prefer to use or see
	Snow.
	Interim processes which in the end are
	there to stay.
	30 minutes change even if enhancement,
	first baer process then feature and release
	and change
	If IT do not buy it or mode 2 services and
	business do not prefer, vendors do not
	like
Please describe the needs?	We do not have everything in snowbe-
	cause it is too slow and bureau-
	craticdouble costs to take to
	snowvendors consuming time to bureau-
	cracy
	Release there, but not planningwhen
	bigger changes then packaged to snow re-
	lease.
	From Jira business sees easy that where
	are going and what is the status
	livo
	Jira

Above results were reviewed and reflected to framework with UPM Process Management Team (Incident Manager, Change and Release Manager and Test and Knowledge Manager)

#### Processes

- Change and Release Management
  - Two different release mgmt. Two modes under the module, two different type of release
  - Features which are changes to be more like tasks instead of bureaucratic features.
  - Feature there without requirements, statuses can be changed and no mandatory connections and dependencies. 3 or four steps instead of all the current steps.
  - Request for enhacement type of change is mandatory. No enhacements changes without business knowledge is the idea but the process is too slow. Cost approval has to be there.
  - Current release mgmt. process to have more flexibility. Testing failed then to go back to design. To think that who is able to change the statuses, not that only one role.
  - Mode 2 release mgmt.-> need to have approvals for e.g. closing the scope then build test and deploy and no dependencies. Release change to be standard change max. Change approve and deployment (implementation approval to create standard change and that's it)
  - If release fails and you move features. You cannot close, cannot cancel.
  - Bigger catalog for standard changes to be created.
  - Lead times-> normal change e.g. planning 2 or 3 days later than when creating, flexibility to this.
  - Business urgent changes. Not emergency which is only for Incidents to be utilized for wrong purpose.
  - Implementation tasks to have order for different vendors.
  - Is it required that who was the consultant who was doing the change...does vendor require this for tracking??? To be checked with security guys.
  - Feature class could be removed or filled automatically, class normal etc. Approval to be removed on feature level but on release level.
  - Not to have to attach the feature to incident or service request.
  - Is the cost mandatory for to define for feature?
  - Cut off the work at least 60% 1h 32 minutes one or 2 feature...very fast by release mgr.

#### Testing and Knowledge Management

 Documentation e.g. functional requirements, test plan. Not needed but testing to be required. Remove the parent.

#### Request Management

- It is not easy to find anything from service request catalog, it has to be developed to more serve the purpose. Clrearly defined services and catalog items for the services.
- More visibility to request process, what is the status.
- Possibility to change the request type
- Business Application Enhancement Request is too massive to be utilized as demand mgmt. for enhancement requests
- Incident Managmeent

- Operational level agreements or metrics reflecting the agreements are not build well, there are issues on the usage and miss use which should be not possible.
- Secure the change progress for Incidents, if change required to fix the Incident. It has to deployed fast.

### People

- Trainings according to different roles. IT Service Management expectations, process expectations for different roles.
- Less roles for smaller Mode 2 Applications or Services.
- Service owners to communicate more on IT Service Management related Matters
- Communication who and what and when according to trainings. It difficult to know that who to train, what to communicate and to who.

#### Tools

- More trainings to business to help them to know how to utilize already available functionalities on the IT Service Management Tool
- Masterdata mgmt. has to be up to date and reliable on IT ERP Service Management System e.g. support group information etc. otherwise the processes won't work.

Appendix 10. Bimodal IT Service Management Proposal Case UPM





### Why?

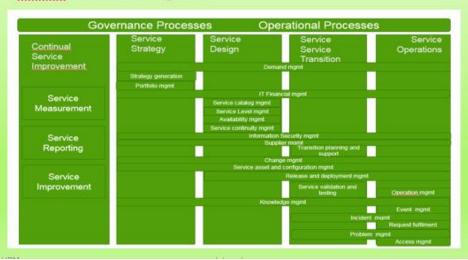
- We need to be able to respond fast in new digital business requirements
- At the same time we need to secure the continuity and availability of more traditional operations
- Business satisfaction with more flexible, simple, faster, transparent, and easy to use services



### What?



- Bimodal Service Management
  - Traditional IT Service Management vs. fit for purpose business transformation enabling IT Service Management



### **Proposal**



#### Processes

- 2 different release mgmt processes
  - Mode 1 process to secure the stability still requires development to be fit for purpose
  - Mode 2 process to remove 60% of the time consumption
    - Less layers, less bureaucracy, less phases, less roles etc.
- More simple, transparent and faster request management (end to end)
- Improved and clearly defined service catalog
- Less roles or combined roles for Mode 2 applications/services
- Clear instructions for new service, what, when, how and who
- More lighter and faster version of service transition and production preparation
- User experience project
- OLA models to be fixed and well working concept to be created. Well working metrics for all applications/service.
- More trainings and communications, more people centric, clearly defined subjects and matters-> straight forward bimodal IT Service Management
- Continual Service Improvement for Bimodal Service Management targeting continuously improved responsiveness.

### **Proposal**



- Tools
  - Tool development according to below requirements

#### People

- Competence check from vendors -> agile, fast working methodologies and styles
- Trainings and knowledge sharing
- Less people involved to Mode 2 services or applications



## **Development Roadmap**

Continue the practice by categorizing all the existing services and applications and by continuing the framework utilization and improvement.

