Change Driven Process Management

- aligning process management in a dynamic environment

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Content

1. Introduction & summary

The following section presents an executive summary of project results together with a summary of research contributions.

1.1 Executive summary

The business environment and requirements on organizations are changing and increase complexity in a progressively high pace which challenge traditional process management. To manage the new situations, many organizations embrace networking and delegation & empowerment with purpose & principles driven management. In parallel, there are continuous external demands for more firm control from regulators and business partners.

To managing innovation and change of processes that are 'controlled & stable' and 'creative & stable' in an efficient way, organizations experience a need to add a set of tools to drive the change. Organizations need to run current operations in parallel with developing new innovative ways of working in an agile way with trust in individuals and teams. A pre-study conducted during the spring 2021 together with SIQ Excellence Center organizations in the Automotive, Telecom, Healthcare and Social services businesses underlines that most organizations have a need for knowledge and methods to support their change driven transformation. Based on the input and learning from the pre-study, a research project to develop tools for 'Change driven Process Management' was initiated. The project was carried out June 2021 – February 2022 together with four SIQ Excellence Center organizations within the Automotive, Energy and Health care businesses.

The agile research project resulted in a toolbox for developing and implementing radically different ways of working with process management enforced by a changing and complex environment. It also resulted in a more holistic view of enablers and principles on how to manage agile process improvements. The results are summarized in a model for Change Driven Process Management that describes different principles for conscious process management decisions in a dynamic environment. The model describes four ways of managing change driven processes with different purposes and subsequent principles: *Traditional Process Management*, *Trust Based Process Management*, *Process Innovation Management*, and *Process Change Management*.

1.2 Summary of Research Contributions

The business environment and requirements on operations are changing at an ever-increasing rate. This challenges the traditional process management principles of *stability and control*. An increased need on social, ecological, and economic sustainability (Broman and Robèrt, 2017; Fundin and Deleryd, 2020), and demands for fast deliveries and increased number of customers and stakeholders (Hallencreutz et al., 2020), implies *faster changes, flexibility and increased creativity*. Process management is approaching a new paradigm that can be described as innovative quality improvement and emergent quality management in operations (Backström et al., 2017). Likewise, the need for governance is increasing due to legal requirements and increased globalization.

Many organizations express a need to balance these conflicting process management requirements to more effectively manage subprocesses based on operations' requirements and needs. The two conflicting forces could be expressed as a dichotomy with diverging needs and contradictory ways on how to achieve results: 1) predictable, well-defined outputs under high level of control, versus 2) flexible and adaptable processes based on trust in coworkers' experience and judgement. All things considered, there is a dilemma of balancing and managing process improvements in organization. However, the common denominator is that all process

improvements start with a certain need with a subsequent type of change initiative. This logic defines the following research question: How to manage process improvements in fast-changing environments with a variety of conflicting stakeholder needs? The objective of this research study is to facilitate decision makers how to manage process improvements to achieve sustainable operations based on a variety of changing needs.

The research resulted in a decision support model for change driven process management. Depending on changing stakeholder needs process improvements could take different turns. By using terminology from the SECI model (Socialization, Externalization, Combination, and Internalization) by Nonaka and Takeuchi (1995), the analysis resulted in four different ways of managing the process change and subsequent improvement. Control and Stability focuses *Traditional Process Management* with internalization and incremental changes transferring existing process knowledge. Creativity and Stability focuses *Trust Based Process Management* with socialization, sharing in the team and community of process practise – internal or external depending on stakeholder needs. Change and Creativity is about *Process Innovation Management* with externalization, e.g. innovative and radical process changes. Control and Change is about *Process Change Management* with integrating an intended change into practise, in other words, learning and training about the new innovative way of managing a certain process. The different turns in managing process improvements is explained with the clock-wise arrows in the model, that is, a radical change might need to be managed through all four quadrants, while minor changes might only need to pass one or two quadrants depending on stakeholder needs.

This research contributes to the discourse on process management theory and practise regarding managing process improvements, exemplified by Gross et al. (2021) proposing business process design spaces, and Reijers and Mansar (2005) addressing layers of knowledge domains for business process design. While current process theory and practise emphasizes stability and control, this research extends the process theory paradigm with new ways of managing process improvements considering a variety of changing stakeholder needs. More specifically, with a change driven process improvement logic, this research anchor and extends current process theories with creativity and change perspectives using a knowledge creation perspective in line with Nonaka and Takeuchi (1995). With a holistic process improvement perspective this research also contributes to operations management theories on how to move between four distinct process improvement phases. This can facilitate decision makers with new process management principles that enable sustainable business operations. Instead of making ‘slow and clean’ or ‘quick and dirty’ improvements, this framework can facilitate ‘quick and clean’ improvements, adaptable to current societal needs.

2. Background

Below is a short summary of the drivers behind the project, the identified need for a model to support process management in a dynamic environment and the pre-study where the first draft of the model was created.

2.1 Today's challenge for most organizations

The business environment and requirements on organizations are changing and increasing complexity in a continuously higher pace which challenges traditional management in many aspects. To manage the new situation, many organizations embrace team- and networking, empowerment, purpose- & principles driven management etc. In parallel, there's an increase of external demands for more firm control from regulators and business partners.

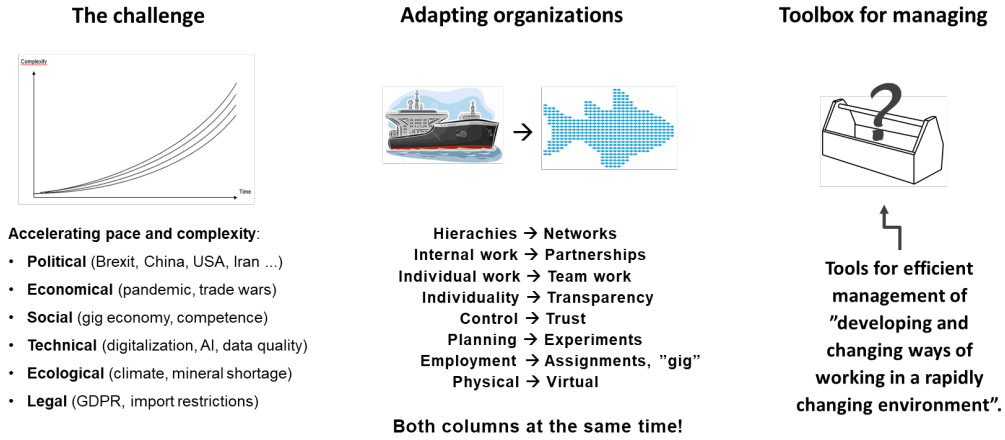


Figure 1: Illustration of Challenges, Ways of adapting and lack of Process Management tools.

2.2 The need for a model to support 'change driven' Process Management

To manage innovation and dynamic change of processes in an efficient way, organizations need to adapt their approach to process management. It is not a matter of 'stability or change', rather the challenge of managing both in parallel, organizations need to run stable and controlled transactional processes in parallel with developing radically new innovative ways of working – and do it faster and in a rapidly changing environment.

If the 'traditional' process management is not applied in a flexible way that fits the new business environment, an organization may end up with different frameworks being applied in different parts of the value chain. Which may cause lack of overview of business operations, fragmentation of end-to-end value streams, bottlenecks that puts work streams on hold etc. – all the things that proper process management can address if applied correctly.

2.3 A draft model and a reality check to test it and verify the need

Some early-stage research questions were:

- which would be the key concepts to understand and map in a model
- if there is a common need for such a guiding model
- if the need differs in various types of organizations

A pre-study was initiated by the Swedish Quality Management Academy/SQMA (a strategic collaboration of research institutes with a focus on quality management) in together with SIQ Excellence Centre (a quality research network for SIQ members collaborating with SQMA).

The interest from Excellence Centre members gave a clear indication that there is a need for more guidance on how to adapt and align to the new dynamic business environment. Five organizations decided to take part of the pre-study:

- One "Region' with a large portion of healthcare services
- One company providing Telecom services
- One Municipality with a multitude of residents' services
- Two Automotive companies, one more B2C oriented and one strictly B2B

The participating organizations were all asked to find two internal processes representing the extreme opposites of the range of "control' needed; Detailed with high level of control and stability *versus* Low level of control, relying mainly on competence of the performer.

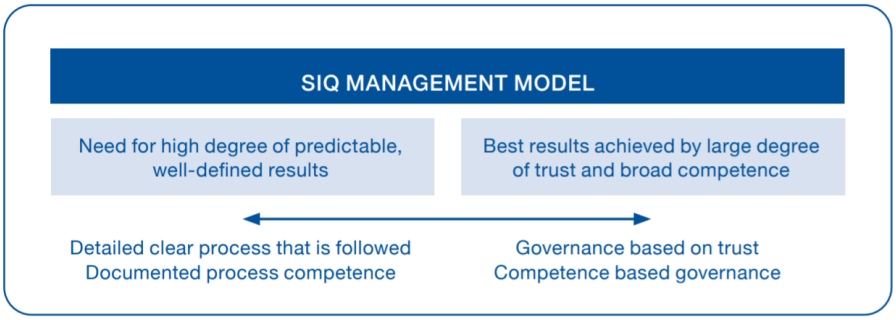


Figure 2: From SIQ management Model manual: The choice of how a process shall be governed and monitored is determined by its complexity and need for exactly predictable and repeatable results.

To provide a base for the study, several models were considered (ref Appendix) but the draft four-quadrant model applied was developed for the specific purpose but influenced by the "Key processes in a Production System' (Backström, Fundin, Johansson (2017).

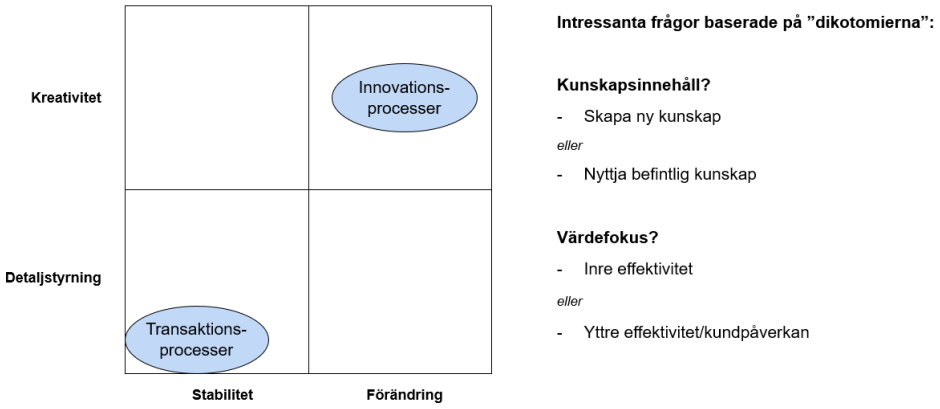


Figure 3: The first draft version of the model for Change Driven Process Management (in Swedish).

2.4 Outcome of the pre-study

It was clearly expressed by all participants that their organizations – regardless of type of business – act in a dynamic and changing environment and have a need for more guidance and dialogue on how to approach process management in a relevant way in that context.

The draft Model for Change Driven Process Management was tested by mapping the provided business processes and terminology for the axis was adapted:

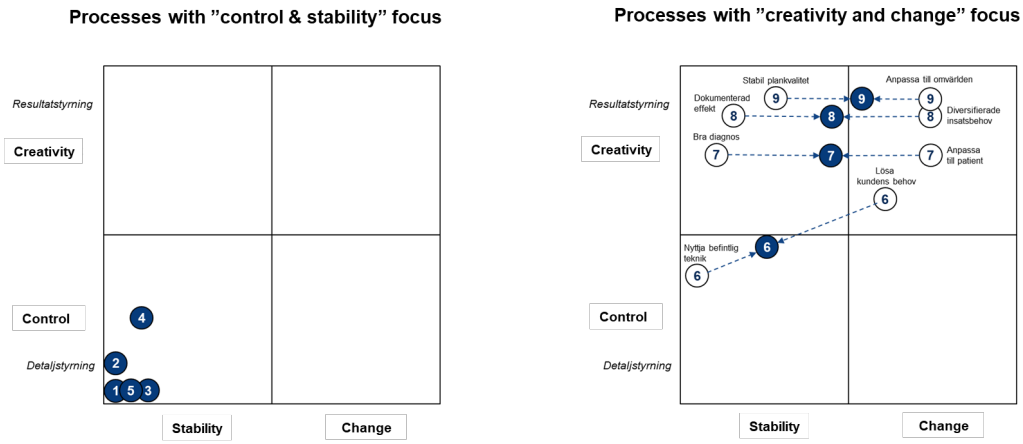


Figure 4: Pre-study sample processes mapped in the model.

The provided business processes were positioned in distinctly different ways despite differences in types of business for the participating organizations.

In the lower left corner, we find processes with detailed documentation, performed frequently by different people but with high requirements on performing them in a very controlled way.

In the upper half, we find processes with unique and unforeseen conditions where we have to rely on the competence of the process worker. Since individual instances are variable and unpredictable it is difficult to model what to do and how.

We can also see that in the upper half, organizations strive to be more innovative, but the stability requirements caused by regulations, efficiency etc limits the level of innovation.

Overall conclusions and need for more guidance:

In the “lower left quadrant’, the traditional process management approaches work well and there is no need for more research.

The other three quadrants – handling Creativity and process Change – need more insight and guidance.

The “upper left quadrant’ and how it relates to the lower left is interesting.

It is of interest to find principles that can align speed and flexibility in all quadrants of the model, i.e. also for traditional process management.

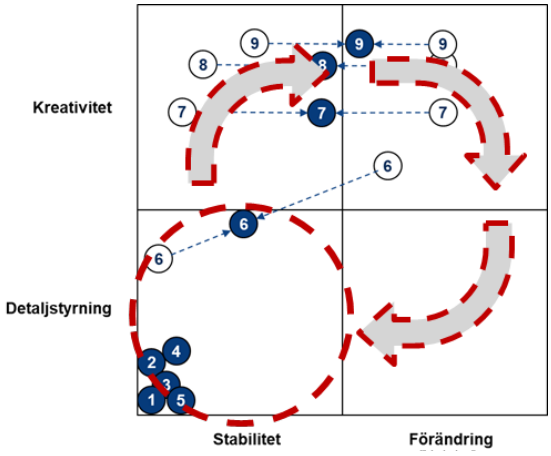


Figure 5: Areas where more guidance is needed.

2.5 Decision to proceed with detailing the model

Based on the outcome, it was obvious that there is a strong need and that the proposed model provided a useful framework to discuss and guide Change Driven Process Management.

Some further work to make it more complete was required:

- More detailed **descriptions and explanations of the whole model** for
- Some more explanation on **Stability**: differences between the Stability/Control versus the Stability/Creativity quadrants
- Some more explanation on **Change**: differences between the Change/Control versus the Change/ Creativity quadrants
- Some more explanation on **Control**: differences between the Change/Control versus the Change/ Creativity quadrants
- Some more explanation on **Creativity**: differences between the Change/Control versus the Change/ Creativity quadrants

When looking into above, the enablers aspects need to be considered:

- How to handle Knowledge
- Culture and Leadership

It was decided by SIQ, SQMA and Excellence Centre to set up a research project to further develop the model. To secure consistency, the SIQ & SQMA representatives from the pre-study should participate in the development project.

It was also proposed that – given the subject – the project approach should apply agile principles to provide new learning on how to approach research projects in a dynamic environment with high expectations on speed and usable results.

3. Project to detail the model

Below is a short summary of the project for verifying and further detailing the model. It contains information about approach, challenge areas & priorities and some conclusions.

The actual outcome – a relevant and more detailed model for Change Driven Process Management – is described in the next section.

3.1 Approach, plans and participants

The project applied a somewhat agile approach with teamwork to jointly develop and provide usable results based on these principles:

- Teamwork with joint development and delivery responsibility
- Six-week iterations producing an output ready for use
- Iteration focus decided by team
- Weekly deliveries from all
- Possibilities to verify the outcomes in the organization
- Participants actively involved approximately 8 hours/week

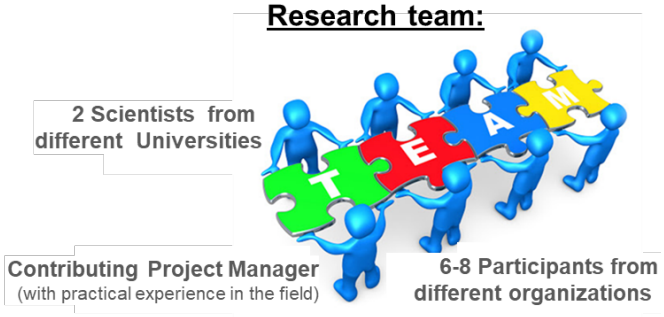


Figure 6: Research team setup

The project schedule included 16 weekly team sessions split into two iterations.

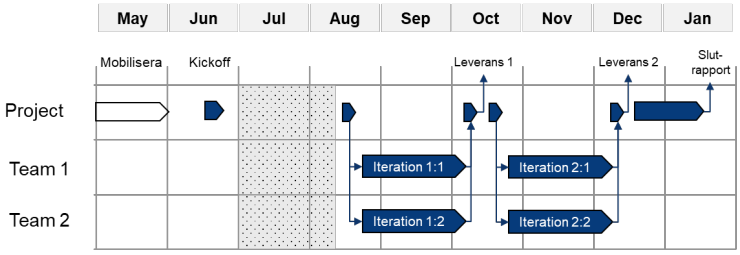


Figure 7: Project schedule

The team prioritized and selected content of the two iterations based on a jointly created "Backlog' with User Stories describing their organizational challenges related to Change Driven Process Management.

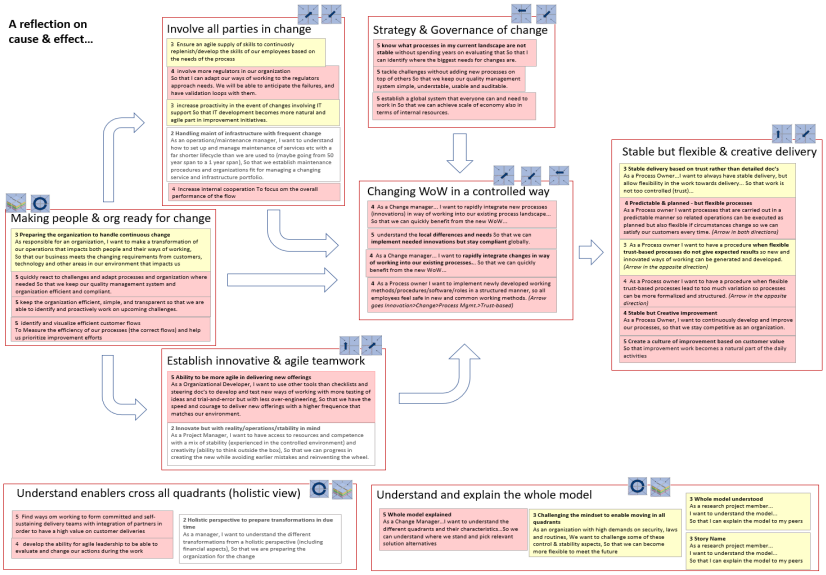


Figure 8: "User Stories'

3.2 Prioritized areas for iteration 1

Iteration 1

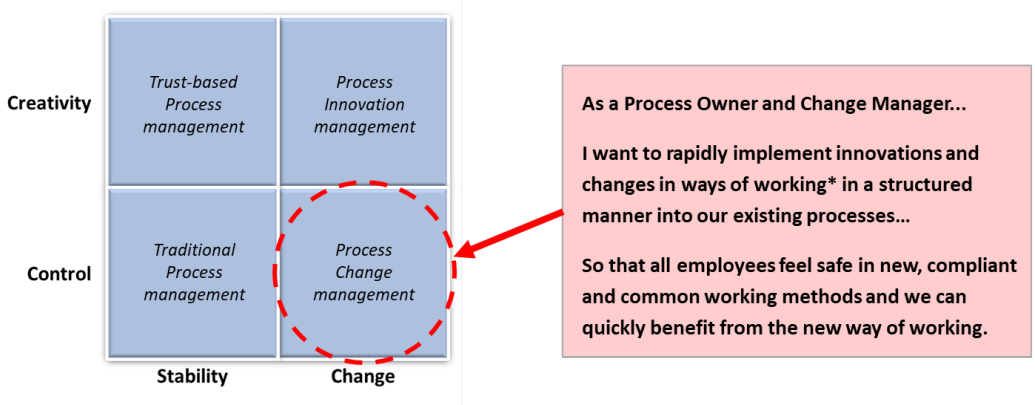


Figure 9: Prioritized area and challenges for Iteration 1

A joint listing and bundling of business challenges for the quadrant gave these two development areas to pursue in two groups:

1. What principles are needed to create 'speed' and efficiency?
2. Understand how to balance the dilemmas; quick vs safe & compliant, internal vs external, local/global etc

In addition, one development area for the model: Explain to understand the whole model including enablers cross quadrants

These three areas were handled in three parallel groups and the outcome is integrated in Section 5.4 - Model for Change Driven Process Management.

3.3 Prioritized areas for iteration 2

Iteration 2

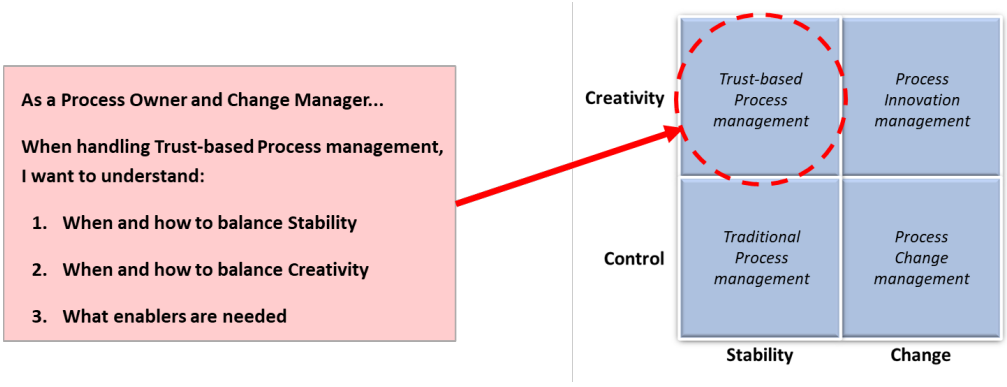


Figure 10: Prioritized area and challenges for Iteration 2

These three areas were handled in three parallel groups and the outcome is integrated in Section 5.4 - Model for Change Driven Process Management.

3.4 Method improvements during the project

One component in an agile approach is to continuously improve the way of working by providing feedback and improving the approach.

Based on feedback from the first iteration, the meeting setup and agendas were changed.

Retrospective, Iteration 1

What went well	Could have been improved	Actions
Very creative and effective meetings, gave new ideas	Some meetings too long & intense	Max 2 hrs, very intense
Worked well with weekly meetings structure	More efficient timewise	Reduce meeting time 50/50 sub+full group 1,5+1
Good, open feedback within the team	Mission and meaning more clear from start	
Good collaboration and pace inbetween		Consider cross-group review of deliverables
Interesting work, learned a lot	Long meetings, hard to stay focused	Consider groupwise reviews + consolidated feedback before the project meetings
Facilitation	Confusing before the workgroup scoping	Consider one physical meeting, hard to be creative "online"
Good output		Hard to free up time in-between meetings, have shorter + more frequent meetings
Eagerness to learn, understand and develop	Learning in-between the workgroups…	Balance review/learning transfer from workshops wg to wg Structured 20 min presentations (+10 min q's)
Collaboration, energy, sharing		
Priorities of areas to focus	Time, availability could create more	

Figure 11: Identified improvements after Iteration 1

The retrospective of iteration 2 and the overall project indicated that – despite very good outcome from the virtual meetings - physical meetings would have provided an even better outcome.

Retrospective, Iteration 2 and whole project

What went well	Could have been improved	Actions
A lot of good results produced despite limited time and virtual	Physical workshops in startup phase could have improved speed, scoping and alignment	Try to meet IRL in 2022
Sharing and networking has been very good, similar challenges in most organizations	Difficult with cross-group insights when working virtually	
Project lead worked well	Not very clear what is the mandate of the team (fully decide or challenge each other)	
The weekly meetings offers time in-between meetings for thinking and reflections		
Very good attendance in project and group meetings		
Good that we learned and improved after Iteration 1		
Openness, positive, respectful, creative, teamwork fun		
Good approach with an "agile" style Research project		

Figure 12: Identified improvements after Iteration 2

Overall method reflections for the whole project are consolidated under section 5.

4. Model for Change Driven Process Management

It is good to bear in mind that a model is an abstract generalization of reality that allows us to discuss the relationships between different variables.

We hope this model can be used to discuss and conclude how to approach process management for a processing area – both for the overall process lifecycle and for the individual changes that are needed.

4.1 Overview and how to use the model

The accelerating complexity and speed of change calls for faster adaption of business operations – behaving 'like an organism rather than a machine'.

'Strictly controlled' ways of working must integrate seamlessly with 'agile and innovative' approaches in a constantly changing environment.

The model offers a way to make conscious decisions of how to approach the change, along with principles and references to support the transition.

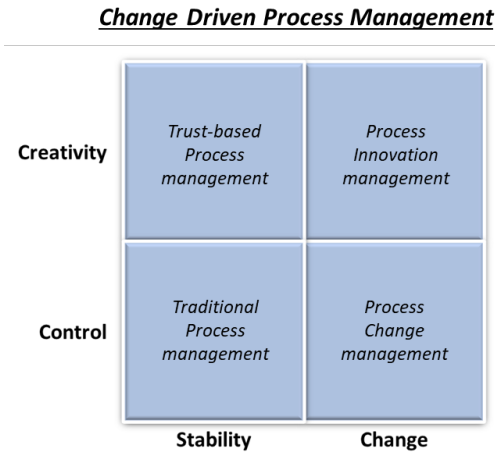


Figure 13: The model for Change Driven Process Management provides principles for conscious process management decisions in a dynamic environment.

It can be used to discuss and find an approach for managing your processes in certain situations:

- How to apply trust-based vs more controlled way of working
- Innovation in the process context and vice versa
- Implementing change in ways of working in a quick but safe & sustainable way

The model quadrants explained:

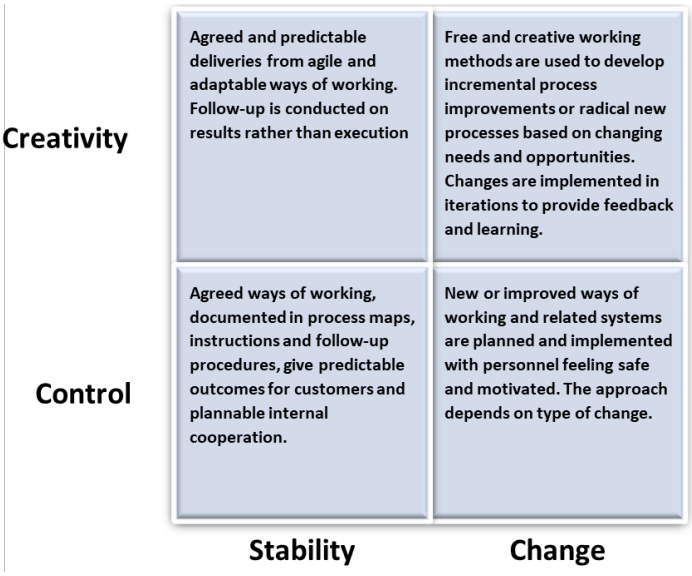


Figure 14: Explaining the quadrants in the model for Change Driven Process Management.

4.2 Guiding Principles for speed

For all quadrants, there are some good practices for organizations that needs to maintain a high pace of process change in sync with a rapidly changing environment. This is a summary of the most vital ones – and most principles can be applied for all the quadrants and the whole model.

#	Principle	Benefit	Description
1	**Provide a structure for priorities, resource balancing and follow-up** (Part of the organizations infrastructure)	*secure alignment, resources, success factors*	Routines and forum for evaluation of initiative scope, relevance & readiness plus priorities and resource availability. Follow-up of progress and benefits realization.
2	**Break down the project/initiative work tasks into smaller iterations.**	*reduce complexity, create continuous flow, enable change of direction*	E.g. no initiatives with less than 1 month or more than 6 months lead time – and all with usable output.
3	**Use empowered, cross-functional, self-organized and collaborative teams.**	*quick anchoring and decisions, continuous improvement, access to knowledge*	Empowered=fully delegated decision mandate and trust (without any escalation need). Cross-functional includes external functions.
4	**Base the team on motivated individuals with full focus, availability & mandate.**	*accelerates the pace of the process change*	Motivated=self-motivated, passionate people. Strive for 100% of the time available for projects (context swapping causes waste).
5	**Apply Methods and Tools that facilitates speed without sacrificing quality**	*deliver value quickly – while safeguarding quality of the outcome*	Use tools from a well proven toolbox and secure skills to use appropriate tools
6	**Share experience openly to develop individual/community knowledge**	*provide instant access to relevant knowledge*	Establish and provide a structure for collecting & spreading knowledge (e.g. Community of Practices)
7	**Work in fast iterations with agreed vision & goals; days or weeks rather than months**	*deliver value quickly*	Deliver and implement small viable outputs to start immediate harvesting of some benefits
8	**Keep the work and the output simple, avoid any type of wasted effort**	*focus effort on value for the customer*	Question all work efforts and outputs based on value for customer (internal & external), make it 'good enough'.
9	**Capture customer and stakeholder feedback for refinement – start in early stages**	*value for the customer & right from start*	Involve customers and stakeholders (internal/external) early and frequently to improve value and avoid wasted effort
10	**Respond to change, adapt the iteration plan based on new understanding**	*deliver value quickly*	Listen to customer feedback and adapt accordingly to maximize value
11	**Communicate transparently in short daily team meetings**	*speed of internal communication, avoid wasted effort*	Keep all team members updated, despite the high pace, to maintain momentum
12	**Communicate regularly and transparently to all stakeholders concerned**	*Secures speed of implementation and quality assurance*	Change management starts on day one, make sure everyone is aware (why, what, when, where, how, who) – e.g. open sessions
13	**Success is measured as improvements implemented in operations**	*Focus on speed of value and benefits realization*	Take responsibility of the benefits realization – an improvement has no value until implemented
14	**Secure post-project coaching to drive and secure the new way of working**	*secure quick and sustainable benefits realization*	Establish support for the business operations until the new way of working is ingrained in the daily work

Figure 15: The 14 Principles for speed.

4.3 Handling different magnitudes of Process Change

The complexity of a change depends on many factors – from a process management perspective it is easier to change with in one process and more difficult if it involves changes in process with no direct relationships.

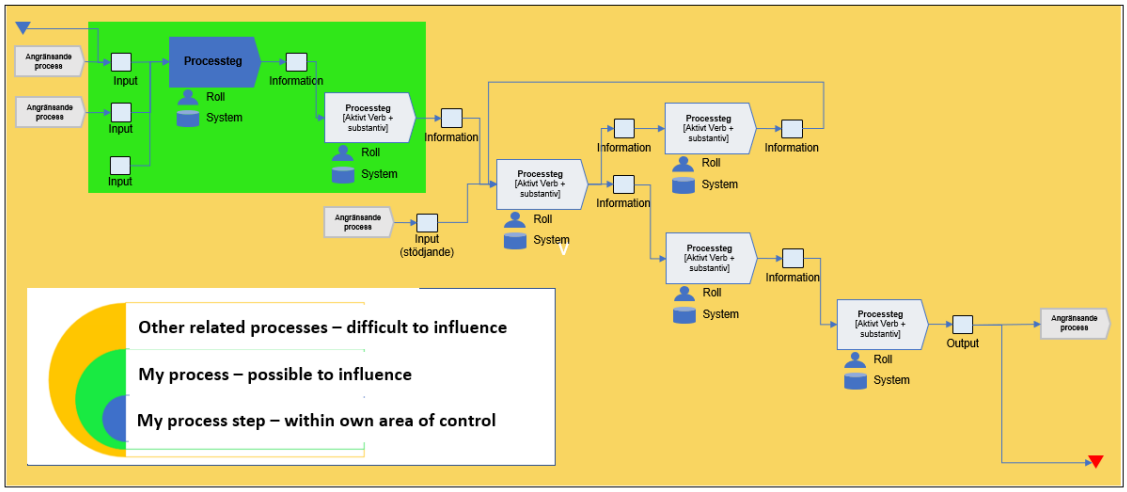


Figure 16: Different magnitudes of change.

The closer to the own process, the easier to influence. The organization needs to provide communication & escalation paths to address supporting and far up- or downstream processes.

The type of change and the maturity of the Process Change Process also impacts complexity:

Change initiative to operational processes	Ad-hoc (not controlled in any way)	Tacit agreement	Spoken agreement	Policy document (Why and what?)	Detailed instruction (How?)	Process map (of the change process) + Templates, Check lists and instructions	+ Analysis and improvements	+ Measurement and Statistical control	COMMENTS
Minor editorial changes in process descriptions etc		x							
Update looks, improve readability			x						
Update document links and references			x						
Upgrade IT system, minor operational process change					x				
Implementing measurements and KPIs					x				
Implement new/updated operational process input/output					x				
New/updated operational process roles					x				
Launch a new core operational process						x			
Remove/exchange operational processes						x			
Implement new IT system, concurrently with operational process changes						x			
Develop and implement upgraded WoW in an operational process							x		
Impact:			narrow		medium		wide		

Figure 17: Relation between process change need and actions in the process change process.

Complexity aspects	**Process impact**	**People involvement**	**Initiative measured in**
Narrow process change	Within one process step	Few	Days
Medium process change	One or several process steps	Many	Weeks
Wide process change	High level processes	Large parts of the organization	Months

Figure 18: Characteristics for different types of change.

4.4 Reflections, movement and flows within the model

Management of a certain process is not static, it will change depending on the influencing environment factors mentioned in the introduction (Technical, Legal, Social etc).

The current state, the magnitude of the change need and the organizational culture will influence how management of a process changes within the model, some examples are:

1. A legal requirement for more control in a trust-based process setting
2. Market requirements on more flexibility in a process with firm control
3. Disrupting technology calls for radically new thinking
4. Implementing change in a process with high control demands
5. Narrow process changes within one process
6. A wide and radical process change impacting the entire organization

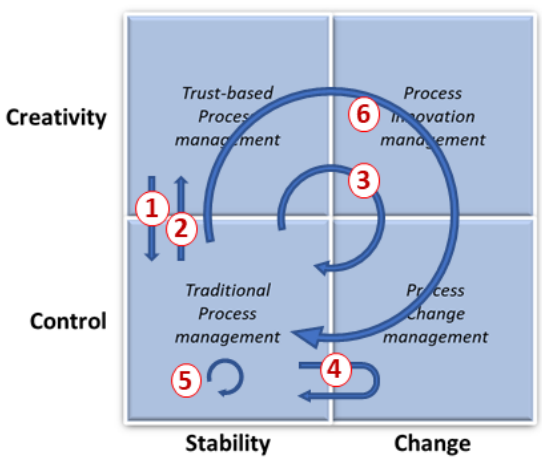


Figure 19: Examples of different change flows within the model

The above examples serves as an illustration for how to perceive and use the model.

Below we will elaborate on the four different dimensions of the model:

- Balancing Control and Creativity for Stability
- Balancing Stability and Change for Control
- Balancing Stability and Change for Creativity
- Balancing Control and Creativity for Change

One common denominator across the model is the need for structures to capture – escalate – evaluate – prioritize and follow-up improvement needs and initiatives. Such a structure will look different depending on the organization's type of operations, size, and culture. (ref Principles for speed, principle #1).

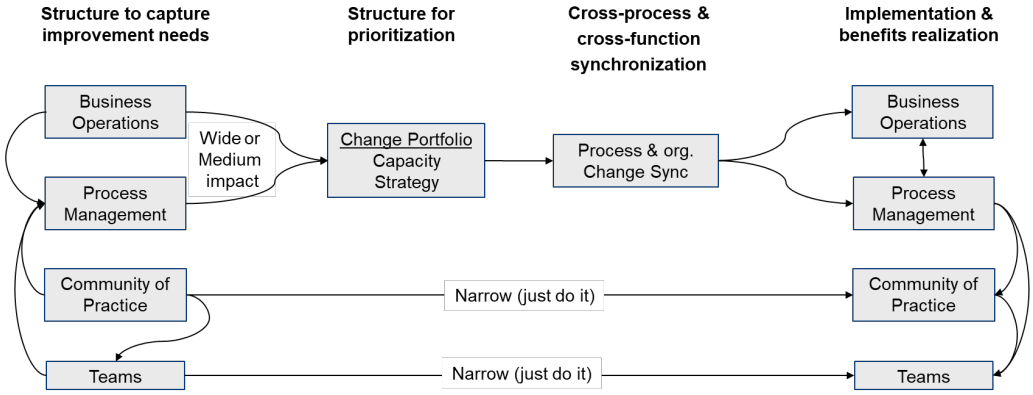


Figure 20: Example of different change flows within an improvement structure

However, doing priorities to balance resources does not differ from traditional process management – except for the openness to change.

Enterprise level priorities:

- Create a holistic overview covering all initiatives (e.g. Initiative backlog)
- Secure Values, Mission and Strategy alignment of initiatives in pipeline
- Clarify who decides the initiative priorities
- Communicate initiative priorities and reasoning throughout the organization
- Regularly question priorities and have the courage to change when needed ← *open to change*

Team level priorities:

- Break down decided initiatives to team level tasks, prioritize hard
- Create a holistic overview covering all team tasks (e.g. Team backlog)
- Prioritize hard based on urgency and team capacity
- Deliver a minimum viable result as a base and iterate to improve
- Have the courage to change task priorities when conditions change ← *open to change*

4.5 Knowledge management

Since process management is vital for managing organizational knowledge of how to operate, the knowledge management is important as an enabler. The SECI model was mapped to the model for Change Driven Process Management and supports the overall full circle when doing radical process improvements but is also applied when moving between quadrants (prototyping, pilots, proof of concept.

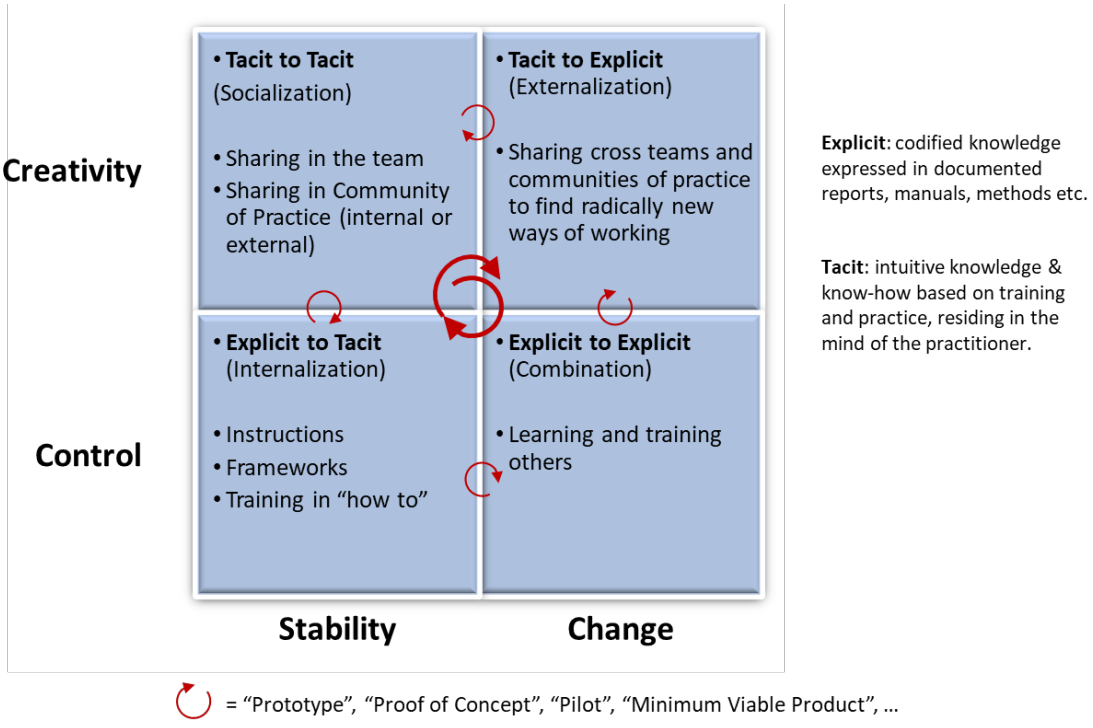


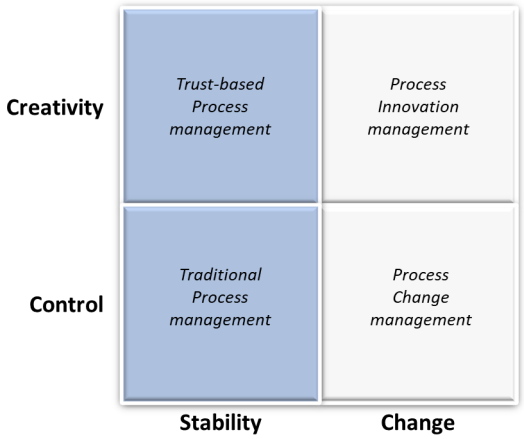
Figure 21: Mapping the model to the SECI model (ref Appendix model #7)

4.6 Balancing Stability – the Control versus Creativity dilemma

Extensive control with strict operational routines may put the organization in a position where it is impossible to meet market requirements because the internal requirements are too rigid.

By empowering co-workers and relying more on their individual skills rather than documented routines, organizations can act faster and become more flexible.

This makes it easier to navigate in a rapidly changing environment but comes at the prize of less control and (if not managed in a good way) less re-use of knowledge – downsides that may put the stability of the output at risk.



Different levels of Creativity & Control

The scale below explains the characteristics of a process with different levels of control and creativity (an example is provided on next page).

Column 1+2 indicates in which quadrant ('Creative' or 'Controlled') the process belongs

Column 1+3 splits into a broader scale and explains the characteristics of in the scale

Column 4+5 indicates the level of detail for describing the flow and activities in the process

The folder illustration in the right-hand column represents a portfolio of available methods and tools (internal, public or individual experience) that the process performer can select and apply as needed – based on purpose and experience.

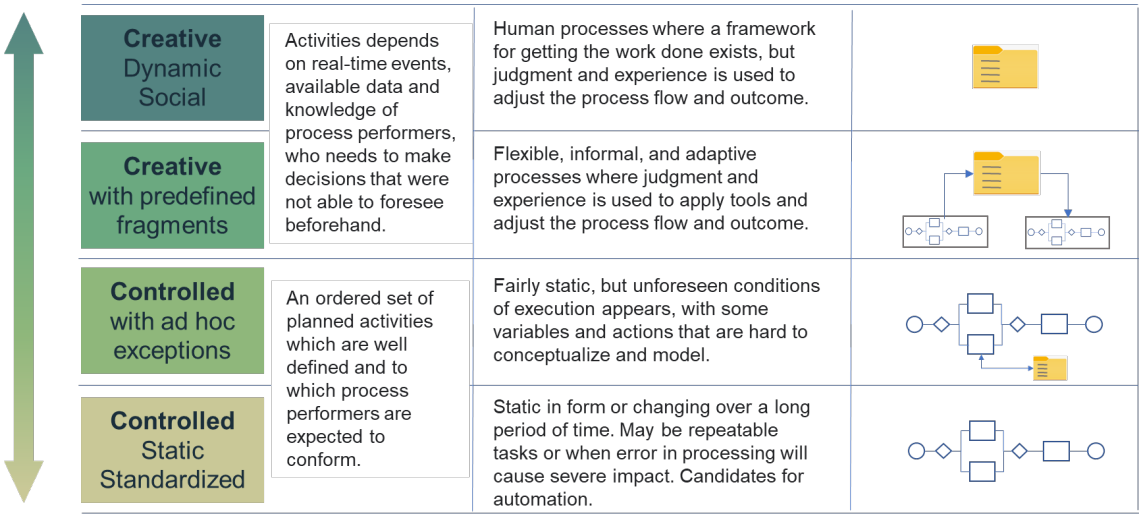


Figure 22: A synthesis of different inputs explaining different levels of control (ref Sandy Kemsley + Bukhsh, van Sinderen, Sikkel, Quartel + Jacob Ukelson)

Different sub-processes in a specific process flow can have different levels of Creativity vs Control, the key is to be aware of these differences and make a conscious decision on what to control in detail and what not to control – rather than applying a one size fits all approach.

Below is an example, applying the model above on various types of Sales Processes:

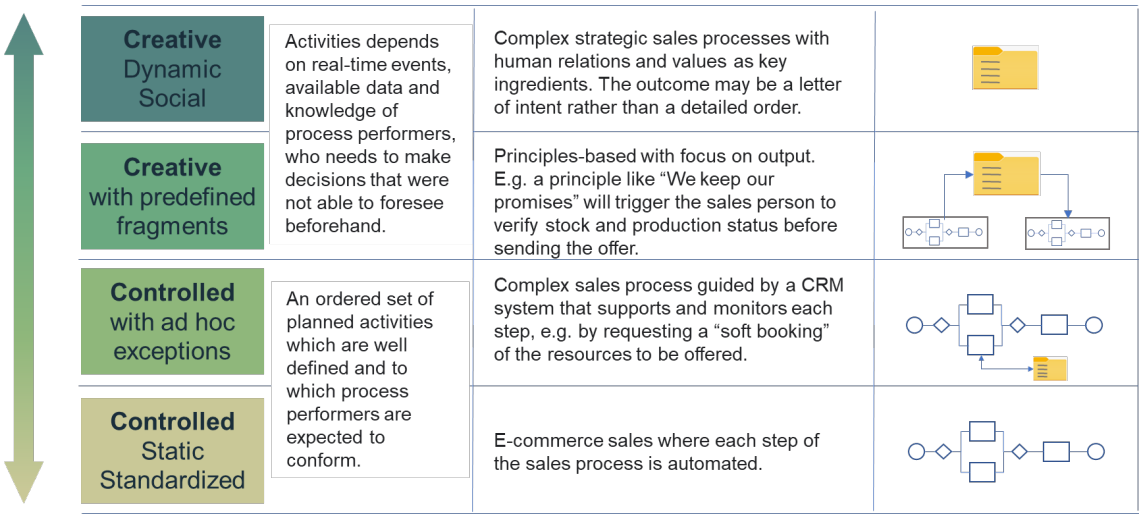


Figure 23: Examples of Sales Processes with different levels of Creativity vs Control

Balancing the level of documentation

Documentation of processes (in procedures/routines/instructions as word or ppt documents, videos etc is often referred to as a problem for creativity since they may become too rigid.

Some guidance to consider why to provide process documentation:

<u>Detailed documentation is not necessarily needed for</u>

- Simple steps performed by a few experienced people
- The output is quality assured by templates or systems providing a standardized result
- Outcome will be used by a limited internal audience
- A simple checklist is sufficient to verify that critical steps are taken
- More detail is not needed and will not provide any value

<u>Detailed descriptions are usually needed when</u>

- Work to be performed by multiple persons with varying skills in a standardized way
- The process is very complex, or its output is business critical for its stakeholders.
- A certain routine or documentation is demanded by external or internal requirements
- Many people need to be trained and supported in how to perform the work
- The process needs to be performed consistently in many places

It is essential to find the right balance, unused or too extensive documentation causes waste.

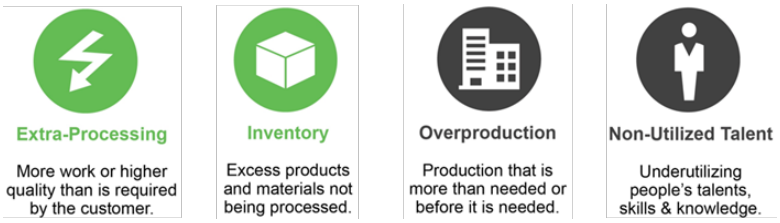


Figure 24: Examples of waste by unnecessary documentation (ref Lean 7 wastes)

Handling Process Knowledge in a Trust-based approach

Since processes are often referred to as documented knowledge, there needs to be other ways of managing knowledge if processes are less documented. Communities of Practice have surfaced as a common way to manage, and provide instant access to, knowledge in a creative teamwork environment.

A Community of Practice is group of people who 'share a concern or a passion for something they do and learn how to do it better as they interact regularly.

Through the process of sharing information and experiences with the group, the members learn from each other and have an opportunity to develop personally and professionally.

Organizational benefits include:

- Decreasing the learning curve of new employees
- Responding more rapidly to customer needs and inquiries
- Reducing rework and preventing 'reinvention of the wheel'
- Spawning new ideas for products and services

Figure 25: Community of Practice

Ensuring the availability of team members

This does not differ from traditional process management.

Of course, the team member must have the ability to do their job and contribute to the team. At least a baseline knowledge to get the job done, ask the right questions to learn, learn from successes and mistakes, and the willingness to continuously learn.

Ensuring relevant the competence and skills within the team

A leader for an Empowered Team must secure the Teams' competence to take the right decisions, else the empowerment becomes a risk.

This differs between a controlled process with detailed instructions and a less defined trust based process.

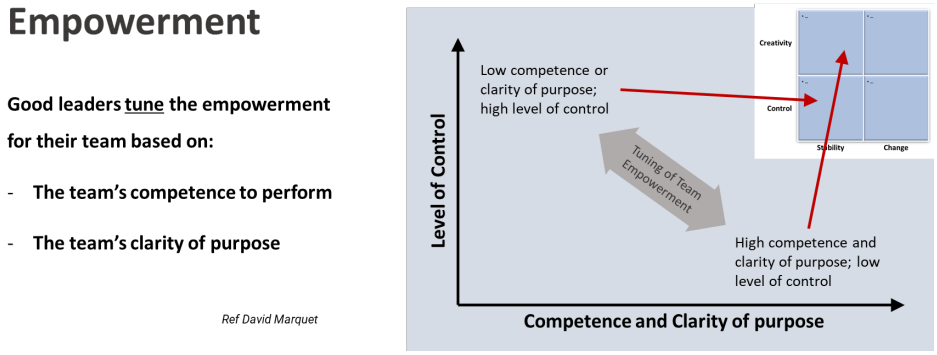


Figure 26: Balancing competence and clarity of purpose for empowered coworkers.

Leadership aspects for teamwork

With increased empowerment of individuals and less detailed control of how work is performed, organizations will depend on the individual team members':

- Tacit knowledge and skills
- Values and motivation

This will require a different approach to leadership with more focus on providing purpose, values and principles and less focus on providing detailed practices and supervising execution.

In practice, both are applied to varying degree and principles driven leadership also takes place in the lower left quadrant.

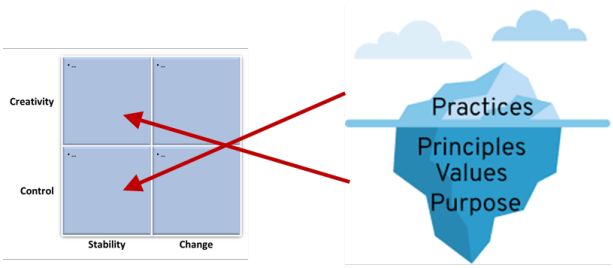


Figure 27: Trust based processes rely more on purpose and principles.

Leadership for all process management based on teamwork

- Enable teams with capacity and knowledge, and continuously develop team capabilities
- Balance the team's workload with capacity to maintain performance and health over time
- Leading by involving, empowering, inspiring, see failures as an opportunity to learn
- Value diversity of opinions as opportunities to improve and innovate

Leadership for more Trust based process management with empowered teams

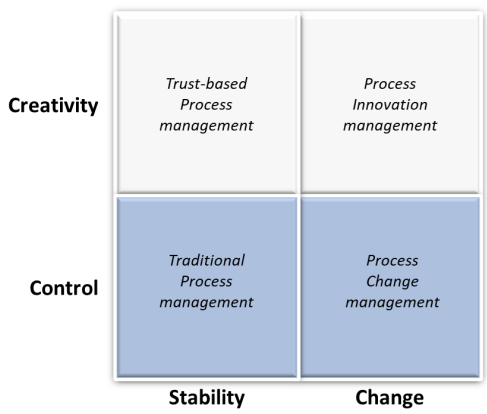
- Be a servant leader – always put team and people first and remove all hinders for the team
- Creating meaning and inspiration that generates a drive for entrepreneurship
- Empower individuals to take decisions based on their competence and clarity of purpose

4.7 Balancing Control – the Stability versus Change dilemma

There's a need to increase the speed of implementing changes – but new ways of working needs to safeguard quality levels, it should not be quick and dirty.

For that reason, process change methods and processes needs to be respected…but also scrutinized to make sure they can provide the required speed of change.

The **Principles for speed** under section 5.2 above were developed to support process change with high speed…but still in a controlled way.



The Process Change process

Changing ways of working in a controlled and safe way requires a sufficiently mature change process (ref section 5.3 above).

Left column describes the type of change needed for an Operational Process, top level describes the Change Process maturity.

Change initiative to operational processes	Ad-hoc (not controlled in any way)	Tacit agreement	Spoken agreement	Policy document (Why and what?)	Detailed instruction (How?)	Process map (of the change process) + Templates, Check lists and Instructions	+ Analysis and improvements	+ Measurement and Statistical control	COMMENTS
Fix spelling error		x							
Update looks, improve readability			x						
Update document links and references			x						
Upgrade IT system, minor operational process change					x				
Implementing measurements and KPIs					x				
Implement new/updated operational process input/output					x				
New/updated operational process roles					x				
Launch a new core operational process						x			
Remove/exchange operational processes						x			
Implement new IT system, concurrently with operational process changes						x			
Develop and implement upgraded WoW in an operational process							x		
Impact:	narrow			medium		wide			

Figure 28: Complexity levels for process change and the Process Change process

The levels of maturity of the process change process included in the columns above.

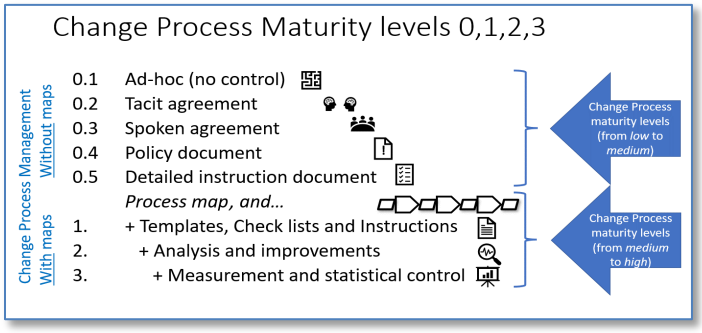
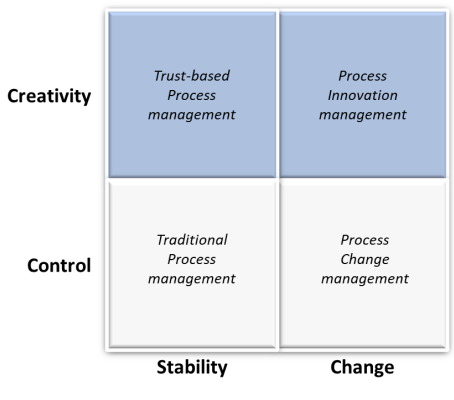


Figure 29: Maturity levels applied for the Process Change process (ref Cronemyr and Huge-Brodin)

4.8 Balancing Creativity – the Stability versus Change dilemma

There is a balance to maintain between empowerment and flexibility to provide a stable output and innovating ways of working that will require radical changes in other processes or functions.

An improvement need may arise in the upper left corner but will, depending on the magnitude of change, require different types of changes and involvement from other organizations and functions (ref process change process, section 5.3 above).



Some decision points are needed to determine magnitude of the change.

Narrow impact = remains within the quadrant for Trust-based Process Management

- Continuous, small change and improvements
- Very narrow scope
- Own process step
- Internal knowledge and competence available
- Common understanding of the deviation

Medium impact = potential innovation that requires cross process synchronization

- Radical change and improvements
- Six Sigma projects (green belt)
- Just enough/medium scope
- In the same process
- Mixed internal knowledge need
- Shared view about the deviation

Wide impact = radical innovation with significant impact on other processes

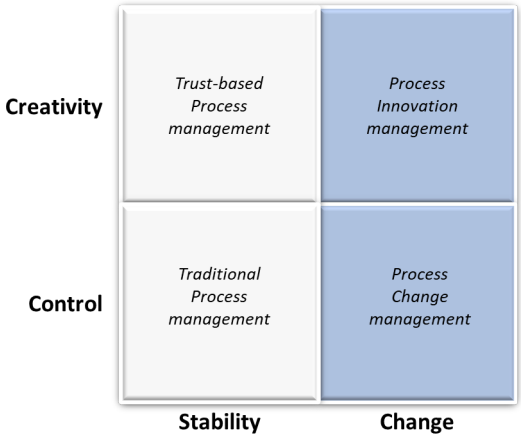
- Radical change and improvements
- Six Sigma project (black belt)
- Wide scope
- Impact on other processes
- New knowledge and competence development
- A need to align views of opportunities and threats

4.9 Balancing Change – the Creativity versus Control dilemma

The Process Innovation Management quadrant was not among the prioritized ones, although it was included in the Creativity section 4.7.

This means that both the Process Change Process aspects under section 4.7 and the related change and maturity levels can also be applied here.

In addition, as the other quadrants, the Principles for speed under section 4.2 can be applied to support in this dimension.



5. Reflections and conclusions

Reflections on the method:

Method	Outcome
Splitting the overall scope into smaller sub-deliverables	• Possible to deliver with the given capacity (resource allocation) • Faster benefit realization, possible to deliver within a given time frame • Enables splitting work into sub-groups in a good way
Prioritizing areas and sub-deliverables for each iteration	• Secures relevance and benefits for stakeholders (no wasted effort on less urgent areas) • Enforces prioritization and focus on what matters
Working as a team with joint responsibility for delivery	• Joint sharing and good learning across participant organizations • Small sub-groups discussions were efficient – had time and focus to discuss
Weekly meetings, both in sub-groups and full team	• Secured focus and continuous delivery
Retrospectives to evaluate and improve ways of working after each Iteration	• Team benefits directly from identified and implemented improvements

Overall method conclusions:

- Very efficient way of working
- Really good output
- Achieved very much empirical maturity and insight in a short time

Method improvements proposed:

- Clarify expectations on and mandates for the groups

- Connect more to practical application in the organizations – examples, testing

Conclusions of the Model:
The model of four quadrants of change-based process management has been very useful in several respects. From a practical view it is useful to understand how to move from one state to another, and when not to move. Also, when moving, how to move quickly without making 'quick and dirty' mistakes.
From an academic view the model expands 'old and rigid' process management to a framework defined by the two dichotomies 'control vs. creativity' and 'stability vs. change', hence making process management more adaptable, agile, and modern. Several previously known models and tools have been incorporated in the new model contributing to a new framework for change-based process management.

Conclusions from the project team were:

- Makes sense as a model – still need to apply practically
- Theoretically good
- Possible to convey
- Very good as a base for discussions
- Tool to communicate and understand that there's a mix of process types and approaches in an organization – parts of processes are simultaneously in different quadrants of the model which requires different capabilities
- Useful for discussions to understand and reflect on where you are and the different aspects of where to go
- The model can facilitate "quick and clean" improvements
- Focus of the model is on processes, not organization – need to emphasize this

5.1 Final Words

This project has been very rewarding, both as a method, using agile project techniques, and the resulting framework and model.
Instead of making 'slow and clean' or 'quick and dirty' improvements, this framework can facilitate 'quick and clean' improvements, adaptable to current societal needs.
Let's start using it.

6. Appendix; Contributors

Participating institutes and universities

Participants in pre-work, pre-study and project:

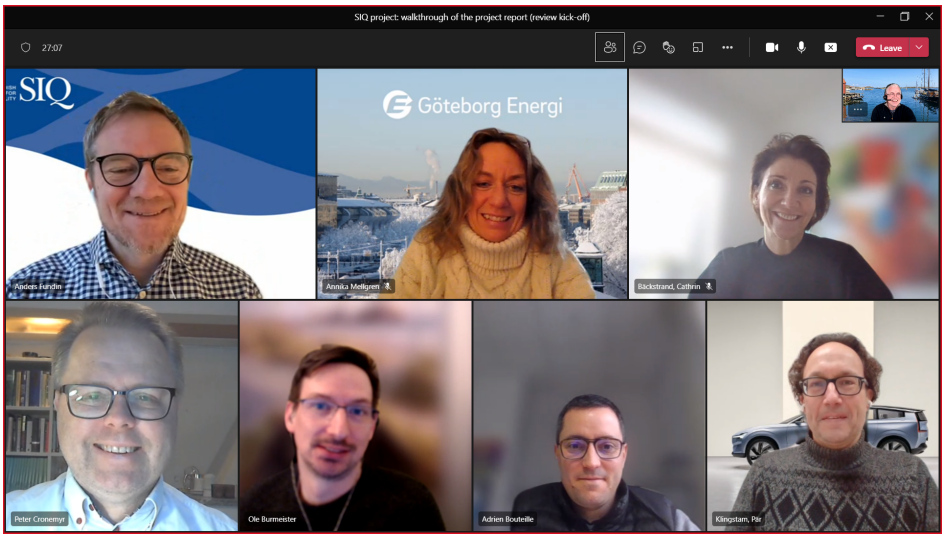
- Lars Wemme, SIQ (pre-study and project leader)
- Peter Cronemyr, Linköping University
- Anders Fundin, Mälardalen University & SIQ

Pre-study – participants

Participants in the pre-study: Region Jönköping; Maysae Quittineh, Charlotte Carlsson et al, Telia: Helena Wännman, Erik Hanberg, Micaela Glindarv, Uppsala Kommun: Therese Andersson et al, Volvo Cars: Andreas Wångblad, Volvo Group: Anne Kristiansson

Project – participants

Participants in the project: Annika Mellgren & Anna-Karin Olsson from Göteborg Energi, Cathrin Bäckstrand from Jönköping Energi, Adrien Bouteille & Ole Burmeister from Getinge and Pär Klingstam from Volvocars.

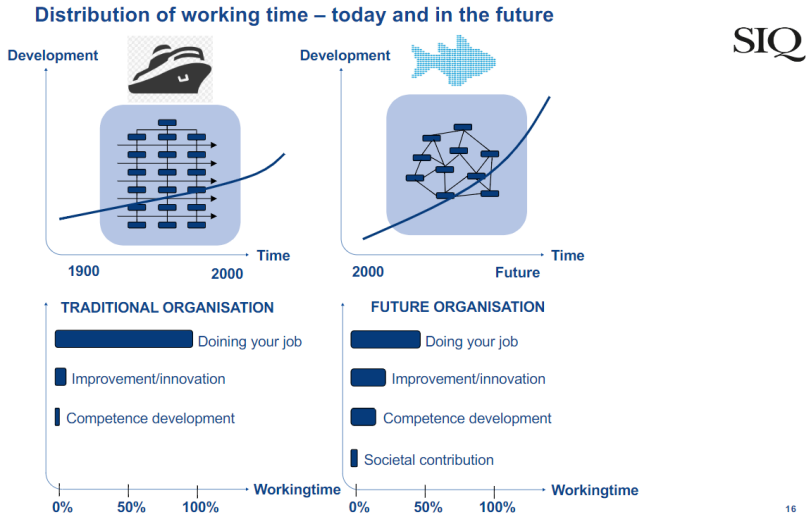


7. Appendix; References

Development of the model for Change Driven Process Management was inspired by many concepts and models – some of them listed below – and each of them they provide some additional perspectives that may be useful:

7.1 Input to the background description

1. Quality 5.0; SIQ, Den femte kvalitetsvågen - SIQ (Swedish) (2020)



References in the introduction:

Backström, T., Fundin, A., & Johansson, P. E. (Eds.) (2017), *Innovative quality improvements in operations: introducing emergent quality management*, Vol. 255, Springer International.

Broman, G., & Robèrt, K.-H. (2017), "A framework for strategic sustainable development", *Journal of Cleaner Production*, Vol. 140, No. 1, pp. 17–31, DOI: 10.1016/j.jclepro.2015.10.121.

Deleryd, M. and Fundin, A. (2020), "Towards societal satisfaction in a fifth generation of quality – the sustainability model", *Total Quality Management & Business Excellence*, DOI: 10.1080/14783363.2020.1864214.

Gross, S., Stelzl, K., Grisold, T., Mendling, J., Röglinger, M. and vom Brocke, J. (2021), "The Business Process Design Space for exploring process redesign alternatives", Business Process Management Journal, Vol. 27 No. 8, pp. 25-56, DOI: 10.1108/BPMJ-03-2020-0116.

Hallencreutz, J., Deleryd, M., & Fundin, A. (2020), "Decoding sustainable success", *Total Quality Management & Business Excellence*, DOI: 10.1080/14783363.2020.1863779.

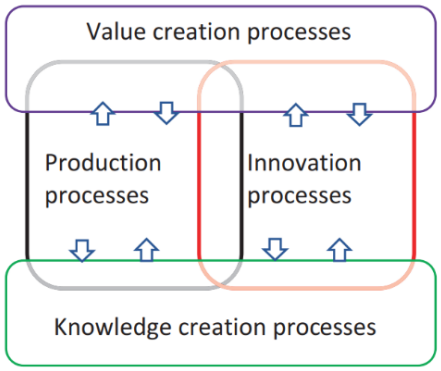
Nonaka, I. and H. Takeuchi (1995), *The Knowledge-Creating Company*, Oxford University Press.

Reijers, H. A., & Mansar, S. L. (2005). "Best practices in business process redesign: an overview and qualitative evaluation of successful redesign heuristics", *Omega*, *33*(4), 283-306.

7.2 Input to the model for Change Driven Process Management

2. Four interacting processes in a production environment

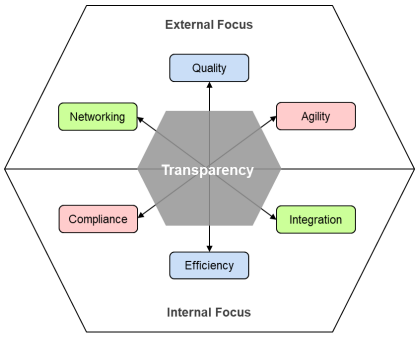
Reference: Backström, T., Fundin, A., & Johansson, P. E. (Eds.) (2017), *Innovative quality improvements in operations: introducing emergent quality management*, Vol. 255, Springer International.

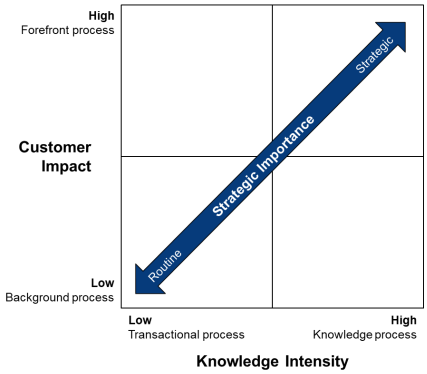


Key processes of production system	Example of dichotomies	
Production process (explicit process)	Stability	Change
Innovation process (explicit process)	Control	Creativity
Knowledge creation process (embedded process)	Exploitation	Exploration
Value creation process (embedded process)	Efficiency	Effectiveness

3. Value-driven process framework

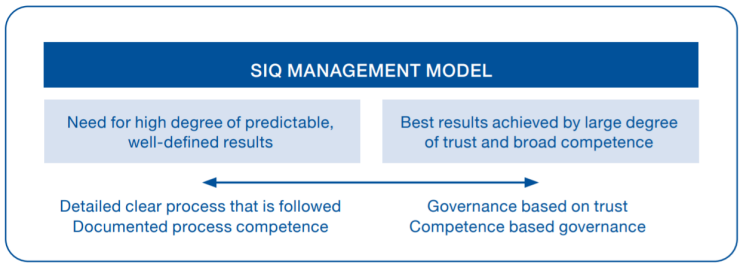
Reference: Franz, P., & Kirchmer, M. (2012). *Value-driven business process management: The value-switch for lasting competitive advantage*. McGraw-Hill.



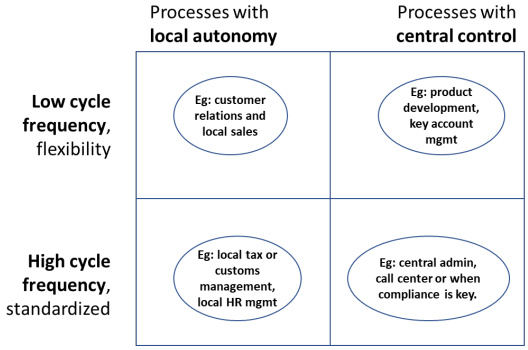


4. SIQ Management Model; SIQ Management Model manual (2021) and an experience-based model from the SIQ Industry Network

Reference: SIQ Management Model manual (2021) downloaded 2022-02-10 at http://www.siq.se/vara-tjanster/siq-managementmodell/, p. 26.



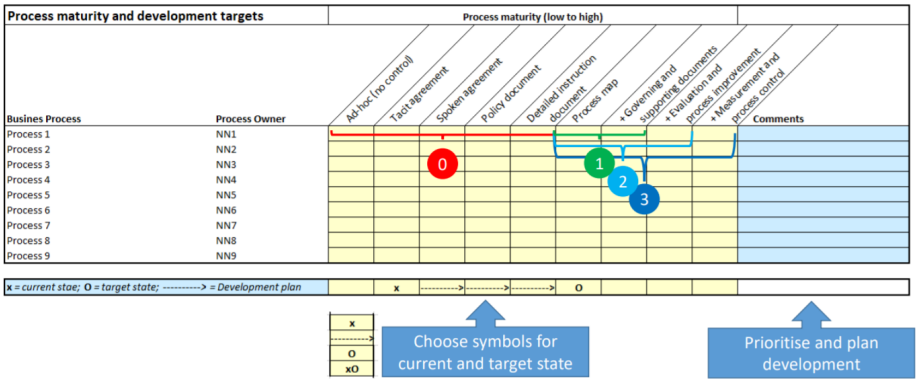
Reference: own picture and experience-based model from the SIQ Industry Network.



7.3 Approaches to managing process change and complexity

5. Process maturity evaluation and planning

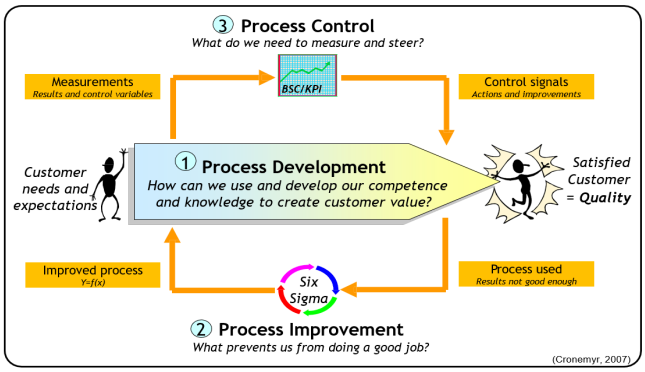
Reference: Huge-Brodin, M., & Cronemyr, P. (2019). Co-creation knowledge for more sustainable freight transports. In *6th International EUROMA Sustainable Operations and Supply Chains Forum, Gothenburg*.



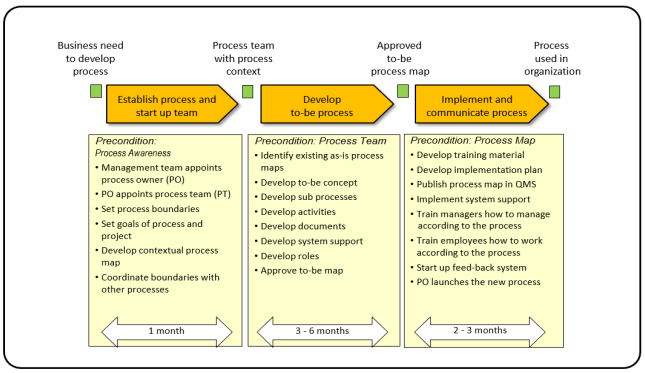
6. Implementing Process Management, steps 1-2-3

Reference: Cronemyr, P., & Danielsson, M. (2013). Process Management 1-2-3–a maturity model and diagnostics tool. *Total Quality Management & Business Excellence*, *24*(7-8), 933-944.

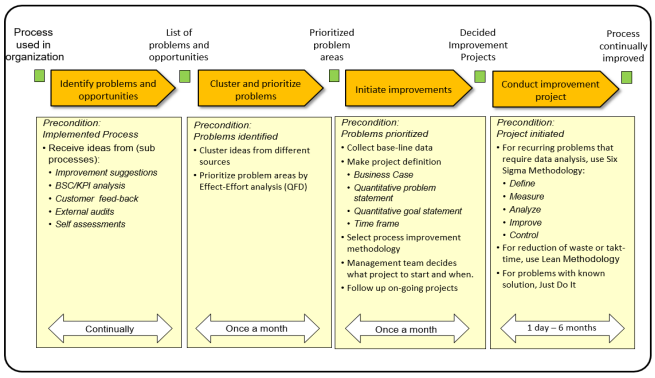
Implementing Process Management, Steps 1-2-3



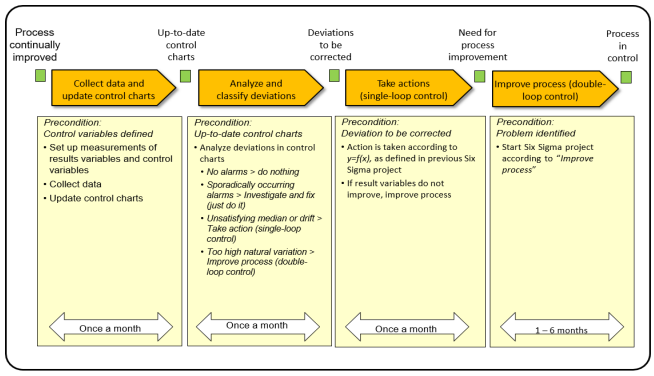
Step 1: Process Development



Step 2: Process Improvement



Step 3: Process Control



7. Agile Manifesto;

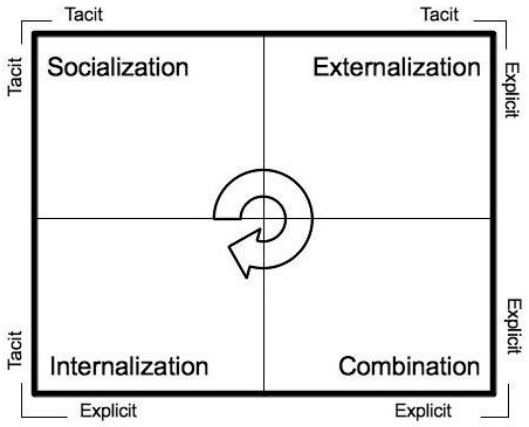
Reference: Fowler, M., & Highsmith, J. (2001). The agile manifesto. *Software development*, *9*(8), 28-35.

12 principles behind the Agile Manifesto (adapted to Process Management)

1 Our highest priority is to satisfy the customer through early and continuous delivery of valuable ~~software.~~ process improvements.	2 Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.	3 Deliver working ~~software~~ improvements frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
4 Business people and developers must work together daily throughout the project.	5 Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.	6 Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.
7 ~~Working software~~ is the primary measure of progress. Implemented process improvements	8 The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.	9 Continuous attention to technical excellence and good design enhances agility.
10 Simplicity – the art of maximizing the amount of work not done – is essential.	11 The best architectures, requirements, and designs emerge from self-organizing teams.	12 At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

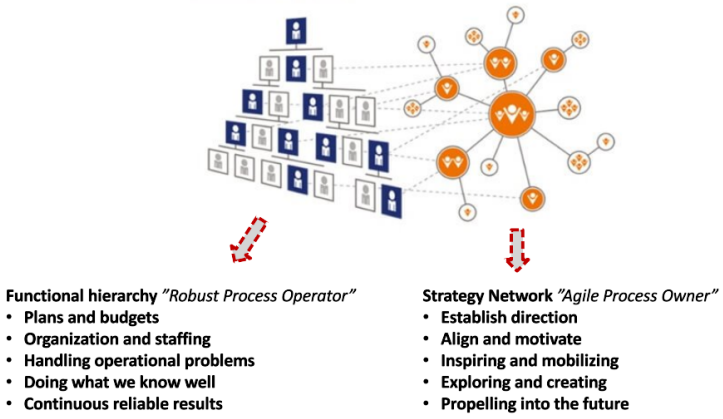
8. The SECI model for Knowledge Management

Reference: Nonaka, I. and H. Takeuchi (1995), *The Knowledge-Creating Company*, Oxford University.



9. A Dual Operating System to handle both traditional hierarchy and dynamic evolution in networks

   Reference: Kotter, J. P. (2012). *Accelerate: Building Strategic Agility for a Faster-Moving World*. Harvard Business Review Press.



10. Input to "Balancing Process documentation" under section 4.6

    Reference: Berman, P. (2014). *Successful business process management: What you need to know to get results*. Amacom.

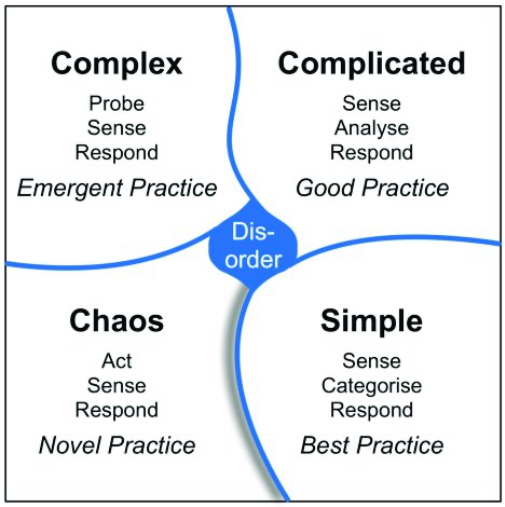
7.4 Leadership and culture

11. Input for leadership aspects in Trust based process management

    Reference: Wolpers (2019), Agile Leadership — A Brief Overview of Concepts and Ideas (link)

12. Input for Leadership in a complex environment;

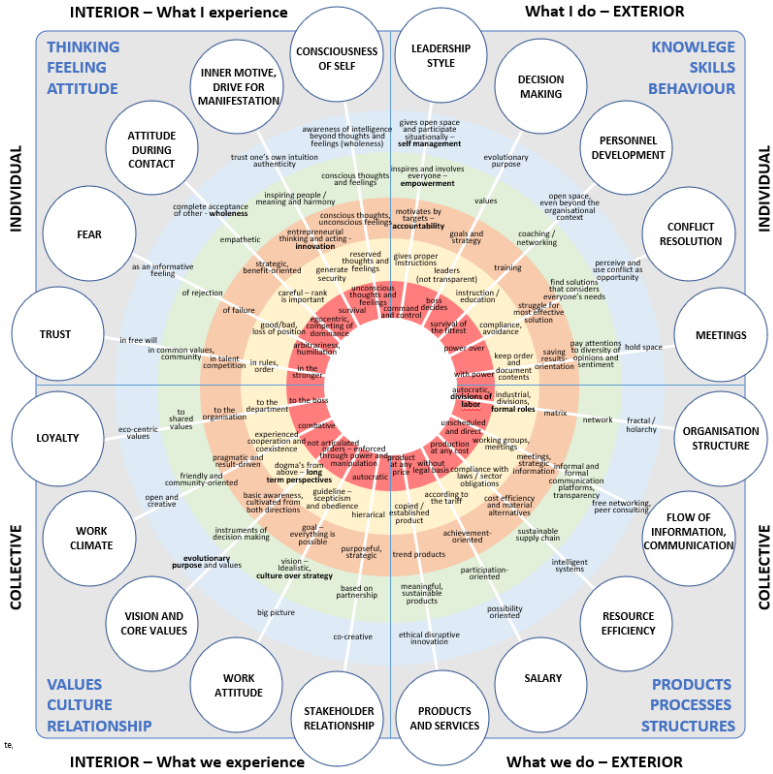
    Reference: Snowden, D. (2010). The cynefin framework. *YouTube video*, *8*, 38. (link)



13. Input for Leadership styles

References: Laloux F. (2014) *Reinventing Organizations: A Guide to Creating Organizations Inspired by the Next Stage of Human Consciousness*, Nelson Parker.

Whole System Change to Reinvent organizations; link www.reinvorgmap.com/



14. Input to Leadership and Empowerment in Trust based process management

Reference; Marquet, L. D. (2015). *Turn the ship around!: A true story of building leaders by breaking the rules*. Penguin UK and Youtube: [Turn The Ship Around]

7 MYTHS ABOUT LEADERSHIP

	Myth		Fact
1.	Good leaders know all the answers	1.	Good leaders say "I don't know“
2.	Good leaders give good orders	2.	Good leaders give no orders
3.	Good leaders empower their teams	3.	Good leaders tune empowerment for their teams
4.	Leaders "motivate" their teams	4.	Leaders make it safe
5.	Teams think their way to new action	5.	Teams act their way to new thinking
6.	Leaders know all, tell all	6.	Leaders know all, tell NOT
7.	Leaders trust their instincts	7.	Leaders act in ways that counter their instincts