

Enterprise Design Cheat sheet

The goal of this Enterprise Design Cheat Sheet is to be a comprehensive summary of steps and concepts needed to create a company from scratch or for an existing company to kickstart an essential transformation. The content is a summary of available and open knowledge.

Organisational change

When I talk to people about their desire to change their organisation, I ask questions. These questions are usually "Can you tell me more?" and "Why is this important to you?"

To give a direction to change, you need to know where your due north is. You need to have a stable foundation in your why before proceeding in change and execution.

To find this stable point I use the models in this document. A conversation starts with, for example "I want to improve the security of my company." I then find out which concept of security is relevant to this question and why this urge to change is present. When the why is clear, we start the journey to the aspects related to this why.

The same journey is there when I advice people in starting their new business, or reorganising their existing business.

When you (re-)start a team it is essential to find the purpose that binds the team-members. For a team to perform optimally you need to establish psychological safety for the team-members. To discover where we stand and what is our stable point I facilitate by going through the models in this document.

Contribution

The working version of this document is on <https://gitlab.com/edzob/enterprise-design-cheat-sheet>. Feedback is welcome. This document will continuously be updated. *This document is initially created by Edzo Botjes (@edzob).*

PDF

This version and new versions of this document are available via Zenodo <https://doi.org/10.5281/zenodo.5844458>.

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1 What is an Enterprise?

An enterprise is an **intentionally created** cooperative of human beings with a certain societal purpose¹.

The purpose and function express that enterprises aim to fulfil or address certain (perceived) wants and needs of (certain) societal member of society at large by delivering products and/or services².

If these two definitions do not apply to the organisation at hand, then this is already a root-cause of mis-alignment, dis-function etc.

The two definitions lead to the following reasoning:

If an organisation is purposeful, and it is intentionally designed **then** the organisation design plays an important role, **else** there is no intention and no purpose³.

2 What are the main functions of an organisation

An organisation consists of three main functions that should be addressed in the design of the organisation^{4,5}.

1. Run (Execution)
2. Change (Implementation & Improvement)
3. Governance

In other words:

1. You need to DO stuff,
2. You need to CHANGE how, what and why you do stuff, and
3. This needs to be done in a manner AGREED upon.

If you want to design or improve an organisation. These are the three main functions of the organisation to start with.

¹Dietz et al, 2013 - The discipline of Enterprise Engineering,
<https://www.researchgate.net/publication/263068480>

²Hoogervorst, 2017 - Foundations of Enterprise Governance and Enterprise Engineering,
<https://www.springer.com/gp/book/9783319721064>

³Daft et al, 2010 - Organisation Theory and Design,
<https://www.goodreads.com/book/show/13113683>

⁴Janssen, 2015 - Enterprise Engineering: Sustained Improvement of organisations,
<https://www.goodreads.com/book/show/26498846>

⁵Botjes, 2018 - CI CD & Your Organization,
<https://www.slideshare.net/edzob/ci-cd-your-organization>

3 What is governance in the context of an organisation?

Governance^{6,7}, is the mutual explicit agreements upon the process (who does what), the structures (who decides) and Relational Mechanisms (how are people appointed etc).

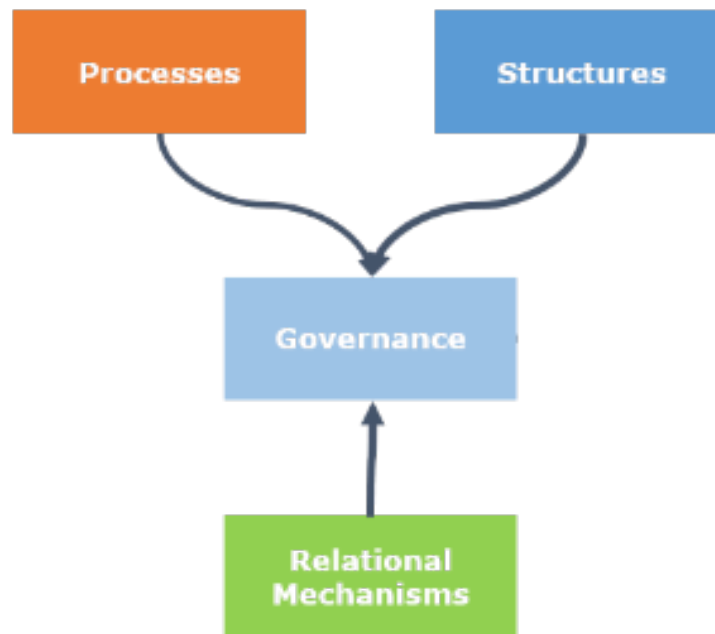


Figure 1: Enterprise Governance is result of process, structure and relational mechanisms.

4 The goal of an Enterprise

The goal of an enterprise (e.g. organisations) is to remain significant for its stakeholders. Stakeholders are owners, employees and consumers⁸.

This applies to all enterprises. If this is not the case then you need to check if you are an organisation.

For a starting company you are already helped by identifying the stakeholders and what defines and improves the relevance. This is what the Porter and Osterwalder are aiming for. When you are in a large organisation Porter and Osterwalder only work well on the team level and on the level of a small autonomous business unit.

⁶De Haes and Van Grembergen, 2015 - Enterprise Governance of Information Technology, <https://www.goodreads.com/book/show/26496980>

⁷De Haes et al, 2019 - Enterprise Governance of Information Technology, <https://www.springer.com/gp/book/9783030259174>

⁸Op't Land et al, 2008 - Enterprise Architecture: creating value by informed governance, <https://www.goodreads.com/book/show/3812927>

5 The importance of the goal of an Enterprise

You need a goal^{9,10,11} also known as the why^{12,13} since this is what is needed to use as motivation¹⁴ and to determine if something adds value.

This is fundamental!

If you do not have a goal, then there is no way to align and you are running around like a headless chicken.

The goal can be as holistic vague OR operational SMART defined as you want.

If there is no goal. Stop! Drink beer. Walk for two days. Does not matter. You need a shared view on what the goal is¹⁵.

In all literature on Enterprise Design, Enterprise Architecture, Business Design, Business Process reDesign, Software Engineering, Requirements Engineering etc, the triad¹⁶ is: Why, What and How.

This is fundamental!

The why can be the center of a circle (Sinek/ Nietzsche/ Frankel)¹⁷ or it can be the top of the ladder (Hayakawa)

<insert image the power of why and ladder>

⁹Goldratt, 1992 - The Goal,

<https://www.goodreads.com/book/show/313637>

¹⁰Goldratt, 1994 - It is not Luck,

<https://www.goodreads.com/book/show/1032532>

¹¹Goldratt, 1997 - Critical Chain,

<https://www.goodreads.com/book/show/848514>

¹²Sinek 2009 - Start with Why,

<https://www.goodreads.com/book/show/7108725>

¹³Sinek 2009 - Golden Circle, How great leaders inspire action,

https://www.ted.com/talks/simon_sinek_how_great_leaders_inspire_action

¹⁴Botjes, 2012 - Why o why v8,

<https://www.slideshare.net/edzob/why-o-why-v8>

¹⁵<https://www.danielstillman.com/blog/abstraction-laddering-for-problem-framing>

¹⁶Kubr, 1996 - Management Consulting,

<https://www.goodreads.com/book/show/4290689>

¹⁷<https://www.danielstillman.com/blog/reflections-over-resolutions>

6 The goal in relation to the operation.

It is important to know that for the viability of an organisational unit^{18,19,20} there are 5 conversations to take place.

These 5 are used **to diagnose whether an organisation in itself is viable or not.**

The elements of Osterwalder and Porter are needed to have a business. All their topics need to be part of these 5 conversations so you can design and operate them.

5. Ethos

- The why, the identity, the norms and values.

4. Outside & Future

- Long term planning, staying relevant, awareness, scenarios and simulations.

3. Inside & Now

- Operational planning, being relevant.

2. Overall harmonization and daily coordination

- Production planning, daily/weekly standups, burn-down sheets etc.

1. Value proposition and value creation

- Purchase, Delivery, production.

When an organisation is in decline or is stuck in a pattern. Best is to identify these 5 conversations and improve these conversations in goal, process, structure and relational mechanism. This model has been proven for teams of 4, small to medium sized companies, large global companies and even national governments.

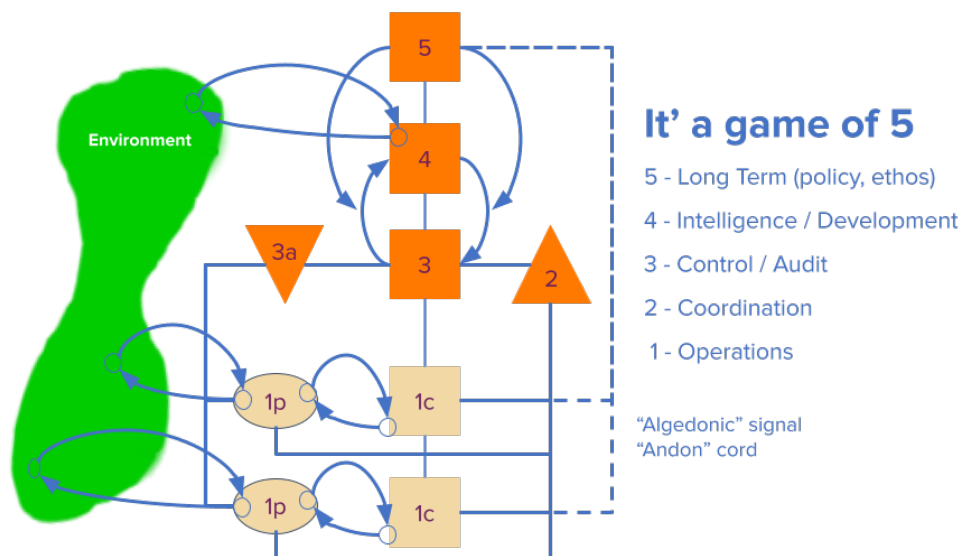


Figure 2: The 5 subsystems in the Viable Systems Model by Stafford Beer

¹⁸Beer, 1979- The heart of enterprise,
<https://www.goodreads.com/book/show/472955>

¹⁹Beer, 1981 - Brain of the firm,
<https://www.goodreads.com/book/show/2197958>

²⁰Beer, 1985 - Diagnosing the system for organizations,
<https://www.goodreads.com/book/show/3664974>

7 Generic IT Goals as help to define your enterprise goal.

The COBIT research group has normalized the goals of 700+ companies. This resulted in 13 archetypes of Enterprise IT Goals.

13 Archetypes of Enterprise Goals

1. I&T compliance and support for business compliance with external laws and regulations.
2. Managed IT-related risk.
3. Realized benefits from I&T-enabled investments and services portfolio.
4. Quality of technology related financial information.
5. Delivery of I&T services in line with business requirements.
6. Agility to turn business requirements into operational solutions.
7. Security of information, processing infrastructure and applications, and privacy.
8. Enabling and supporting business processes by integrating applications and technology.
9. Delivering programs on time, on budget and meeting requirements and quality standards.
10. Quality of I&T management information.
11. I&T compliance with internal policies.
12. Competent and motivated staff with mutual understanding of technology and business.
13. Knowledge, expertise and initiatives for business innovation.

Limit the number of your Enterprise Goals

For an organisation it is best to select 1 or 2 of these goals. More than 2 will be very difficult, non-efficient and non-effective. A proven way is to send out an online survey and let people select two from the list or divide 9 points over 1 or more of the items in the list.

For people that have a management background, the COBIT²¹ toolkit provides tips on important business/IT functions based on the selected enterprise goal.

²¹De Haes et al, 2019 - Enterprise Governance of Information Technology,
<https://www.springer.com/gp/book/9783030259174>

8 Success as a business is the sum of 5 factors

Running a business and being a successful business are two different things.

The success-model of Osterwalder²² is useful and complete.

Osterwalder states that success is the result of 5 factors. It is valuable to accept that timing includes luck.

Usually these 5 factors are linked to the goal and designed and optimized in the strategic conversations within the organisation.

In startups the feedback loops are smaller and the conversation is usually a combination of strategy, tactics and operation²³.

This is a reason that a startup can faster innovate then a large enterprise.



Figure 3: Success formula by Osterwalder

²²Osterwalder, 2015 - 5 tools for new business success,
<https://www.strategyzer.com/blog/5-tools-for-new-business-success>

²³Ries, 2011 - The Lean Startup,
<https://www.goodreads.com/book/show/10127019>

9 Ideation, Lean Startup and Agile

Figure 4 is “an” example of a three^{24,25,26} step approach to create a new company.

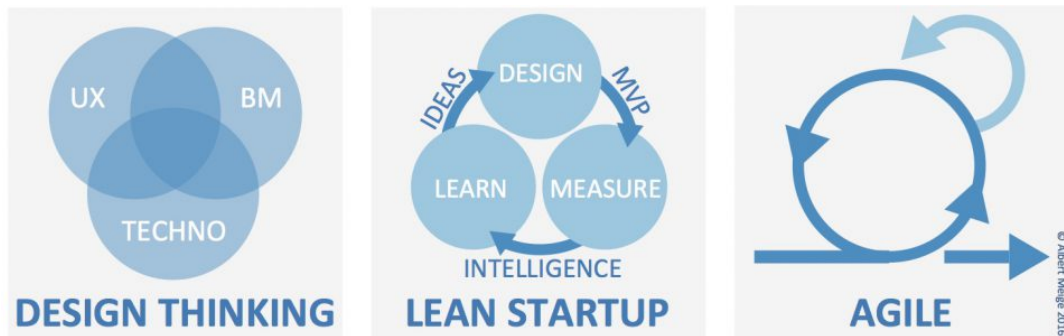


Figure 4: Design Thinking, Lean Startup and Agile Production in order.

There are many different ways to create coherence in a group of people and pivot around a goal, market and product. The consensus with after the waves of startups in 2000, 2008 en 2014 is that you start with design thinking practices followed by validating the hypothesis from the ideation in a lean startup cycle. When the business model and the product/market match is clear, then continuous iterations via an Agile method is the defacto standard.

To create a new proposition (blue ocean²⁷) the ideation method is often used. This is the more emergent way of working to identify the Solution (gain) with the market fit (pain). The google design sprint²⁸ is an example of this. Every organisation has gone through ideation and redoes this when creating a new value proposition.

²⁴Meige, 2016 - HBR - Three Factors Driving the Uberization of Talents,

<https://open-organization.com/en/2016/01/29/three-factors-driving-the-uberization-of-talents>

²⁵Gartner, 2017 - Enterprise Architecture and Technology Innovation Leadership Vision for 2017, https://www.gartner.com/binaries/content/assets/events/keywords/enterprise-architecture/epaeu17/enterprise_architecture_and_tech-innovation.pdf

²⁶Botjes, 2018 - Three Steps to Successful Innovation,

<https://labs.sogeti.com/three-steps-to-successful-innovation>

²⁷Kim, 2005 - Blue Ocean Strategy,

<https://www.goodreads.com/book/show/4898>

²⁸Knapp et al, 2016 - Sprint,

<https://www.goodreads.com/book/show/25814544>

Accelerate Innovation, Learning and Customer Value

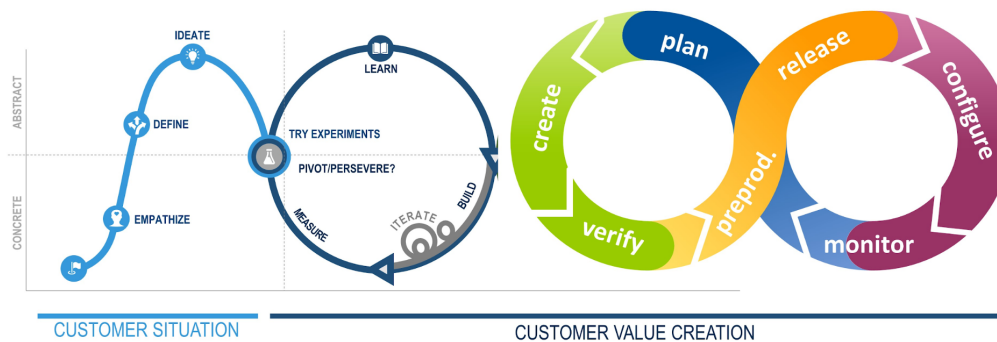


Figure 5: Accelerate innovation, learning and customer value defined by Gartner

Lean startup methods²⁹ and tools are used to validate the idea with (launching) customers and is used to fine-tune the idea into services and products. After Go Live with the end product you need to use an Agile way of working to stay relevant.

Important to understand that all three of the stages utilise a different Governance model, operating model and risk appetite.

²⁹Ries, 2011 - The Lean Startup,
<https://www.goodreads.com/book/show/10127019>

10 Decomposition of an Organisation

Porter's Value Chain

Figure 6 is a classic³⁰ way to visualize and define a value chain.

Porter's value chain is taught at every business school in the world for decades. It is still relevant as a decomposition of what creates value in an organisation. Within every business you should be able to identify the elements and name the current role and the future role.

The focus in regards to energy, feed-back-loop intensity and maturity is dependent on the organisational culture and vision.

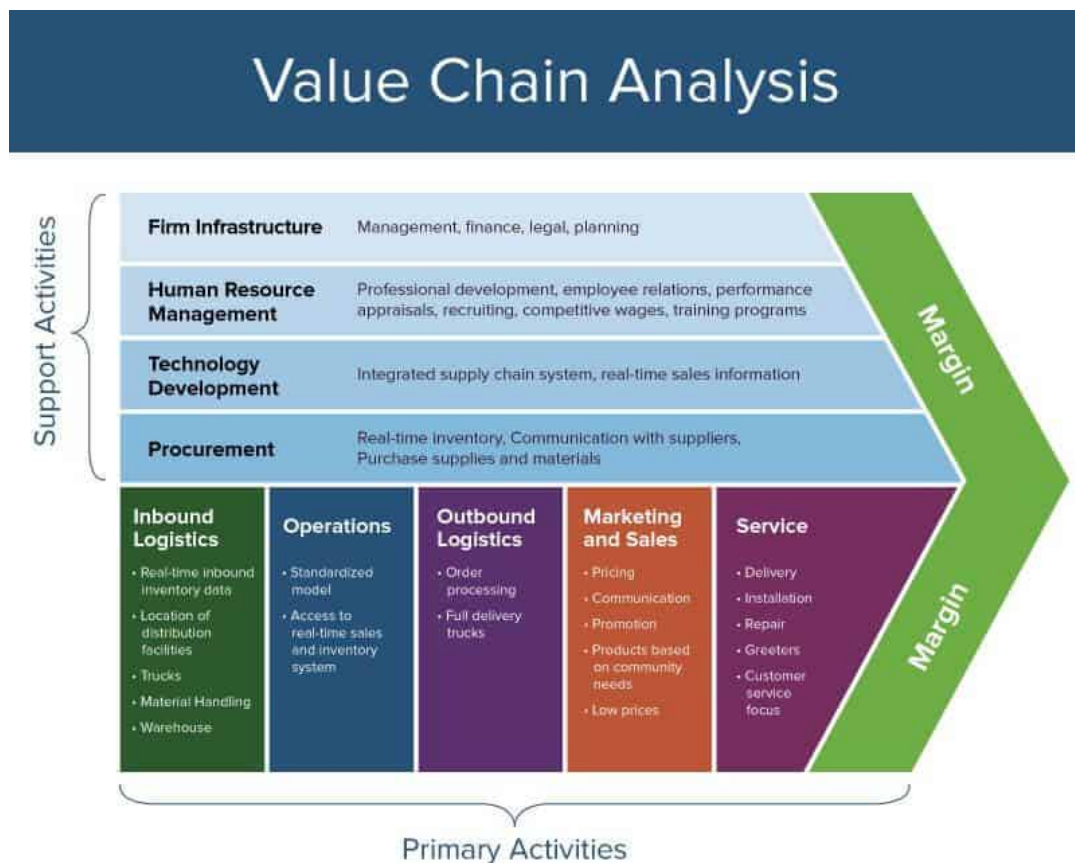


Figure 6: Porter's value chain

³⁰Porter, 1985 - Competitive Advantage: Creating and Sustaining Superior Performance, <https://www.goodreads.com/book/show/1826181>

Business Model Canvas

During the startup-boom Alexander Osterwalder created a “canvas” with the goal to have a version of Porter’s Value chain model usable in the Lean Startup section of the life-cycle of an organisation. This is the Business Model Canvas³¹.

For a business to develop away from the blue ocean, there are multiple iterations needed to cover all the 9 domains with at least one item with a minimal maturity. For development you need a vision (goal), someone with mandate, capability and ability to take care of one or more items per domain.

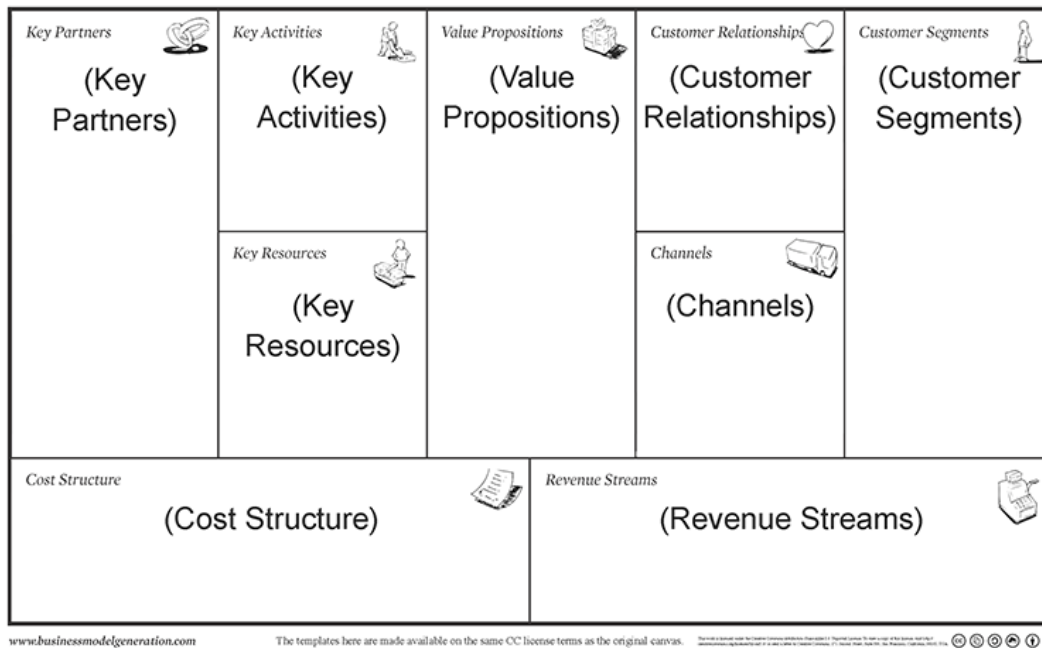


Figure 7: Business Model canvas by Osterwalder

³¹Osterwalder, 2010 - Business Model Generation, <https://www.goodreads.com/book/show/7723797>

Proposition Canvas

The most important thing in a business model is the match between the customer's pain and the gain provided by the service/product. For this there is the proposition canvas³². The proposition is off-course part of the product-market fit. The next step is to identify the type of customers that feel the pain, so you know how to optimize marketing and propositions for these types of customers.

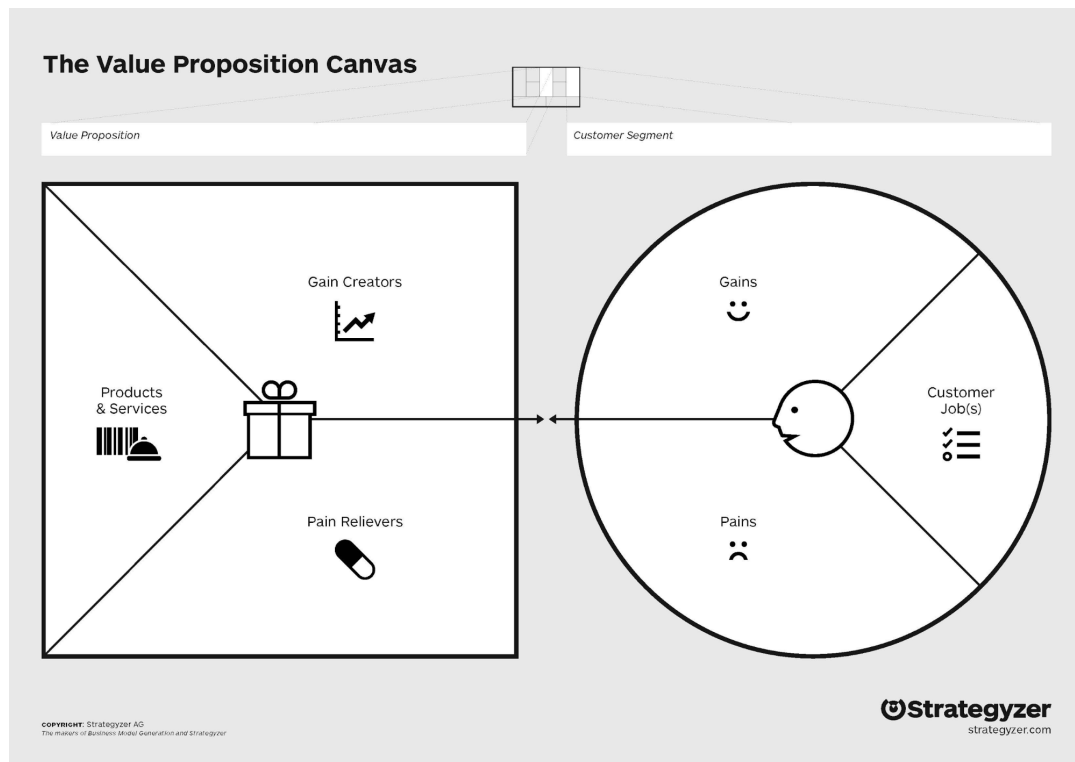


Figure 8: Value proposition canvas by Osterwalder

³²<https://assets.strategyzer.com/assets/resources/the-value-proposition-canvas.pdf>

Persona Canvas

Persona's^{33,34} are used in marketing to identify 2-4 target demographic to focus the content and marketing on.

BMI • Persona canvas

Persona _____

● **Negative trends**
Negative trends from the environment

● **Positive trends**
Positive trends from the environment

● **Headaches**
Professional and work related issues

● **Opportunities**
Professional and work related positive outcomes

● **Fears**
Personal issues

● **Need**
What does this person really want?

● **Hopes**
Personal goals and hopes

Name _____

Role/occupation _____

Age _____

Other information _____

© Business Models Inc. Adapted from designabetterbusiness.com

Figure 9: Persona Canvas

³³<https://www.businessmodelsinc.com/about-bmi/tools/persona-canvas>

³⁴<https://thecanvasrevolution.com/product/persona-canvas>

Pitch Canvas

This is the summary of the proposition, the persona and the business model of the business. The pitch canvas^{35,36}, makes it clear to you and your investors if the proposition is not too complex and if the fundamentals are clear.

The Pitch Canvas[©]

An entrepreneurial brainstorming tool that helps you structure and visualise your pitch on one page.

<h3>Simple Statement of what change you and your product are making in the world.</h3> <p style="font-size: small;">A memorable one-sentence explanation of what you do for customers.</p>	
<h4>Pain (+ Gain)</h4> <p>What problem are you solving for your customers? What does the pain result in? What opportunities do you provide for people to be faster, more cost-effective, more efficient, happier, safer? How many people need this problem solved - market size? Have you validated that people will pay to have it solved?</p>	<h4>Product</h4> <p>As simply as possible: what does your product do for customers? How does it work? How have you tested it with customers? (Be sure not to let the product dominate the pitch.)</p>
<h4>Product Demo</h4> <p>Live demo? (always risky, but powerful if it works...) A screenflow movie of a working app convinces this is for real. Physical product convinces you can execute. Screenshots are also OK, but can look like a mock-up - moving product on screen is better. Can you show a real customer using it?</p>	<h4>What's Unique</h4> <p>Technology/Relationships/Partnerships. How do you help your customers get results differently to your competition, or alternatives? Show you have researched the market and know what competition is out there.</p>
<h4>Customer Traction</h4> <p>Success so far? Pilot customers? Major brands? Progression in users or downloads? Customer reference quotes or movies? PR coverage? Competition wins? Use data and facts to strengthen your case.</p>	<h4>Business Model</h4> <p>How do you get paid? What's the opportunity for growth? How can you scale beyond your current scope: new industries, territories, applications of partnerships and technology?</p>
<h4>Investment</h4> <p>Have you invested money yourself? Have you raised money so far? How much are you looking for now? How many, and what type of investor are you looking for? What expectations do you have of your investors; network, expertise? What big steps will you use the investment for? What milestones will you reach with the money?</p>	<h4>Team</h4> <p>What relevant experience and skills does your team have that supports your story? Brands worked for? Achievements? Sales success? What binds you together as people and as entrepreneurs to fix this problem? What's special about the character of your team, that will make you stand out and be memorable?</p>
<h3>Call To Action and End Statement</h3> <p style="font-size: small;">Finish the pitch strongly with a clear request for the audience to take action - what is their first next step?</p>	
<h3>Why You?</h3> <p style="font-size: x-small;">NOTE: Why You? can show up in any part of the pitch. Why do you care about solving this problem for your customers? How has your life been affected by this industry and business? Why should your audience have confidence that you will do what you say you are going to do?</p>	

DESIGNED BY: Best 3 Minutes Presentation Services
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Please feel free to share The Pitch Canvas®.
 Ensure you reference Best3Minutes.com after each use.

³⁵<http://investment-ready.org/wp-content/uploads/2014/11/pitch-canvas.jpg>

³⁶<http://best3minutes.com>

PEST Analyse

The proposition is to analyse and design the product - market mix. The customer's persona is there to analyse and design the buyer in the market mix. The PEST^{37,38} analyse is there to analyse the trends in the market and the impact on the persona's and the impact on the product-market mix.

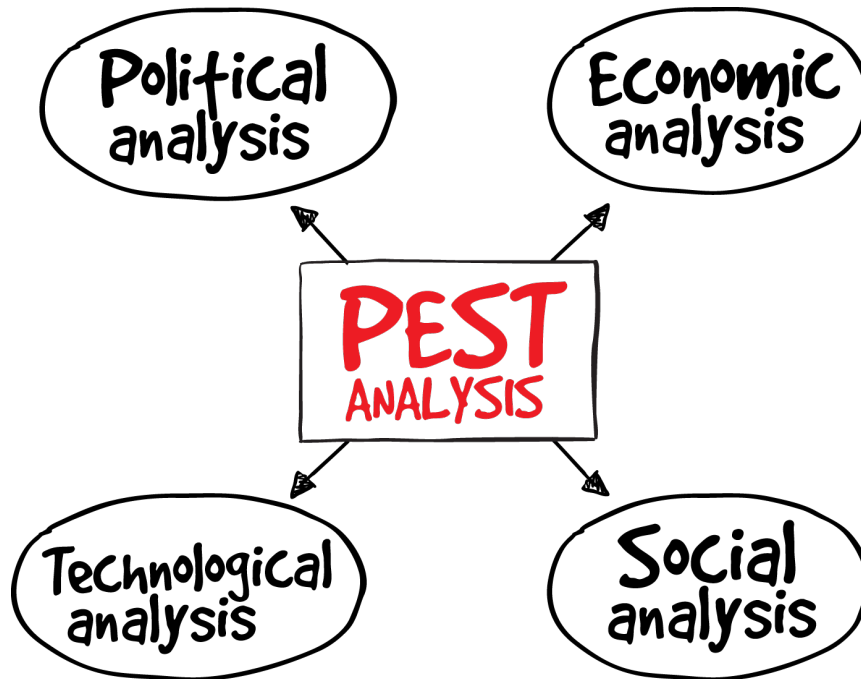


Figure 10: PEST analysis by strategic management insight

³⁷<https://strategicmanagementinsight.com/tools/pest-pestel-analysis.html>

³⁸

https://en.wikipedia.org/wiki/PEST_analysis

Target Operating Model

An operating model³⁹ is both an abstract and visual representation (model) of how an organization delivers value to its customers or beneficiaries as well as how an organization actually runs itself. The Target Operating Model is the desired future state⁴⁰.

There are different ways of defining the elements that make up an operating model⁴¹.

1. People, process and technology is one commonly used definition,
2. Process, organization and technology is another.

Business Model Canvas is about the value proposition design. Operating Model Canvas⁴² is the how the organisation is being organised^{43,44}.

Key is: who does what when and how.

See also the beginning of this document on “Enterprise Governance” addressing: (1) Structure, (2) Processes and (3) Relational Mechanisms.

The Operating Model Canvas

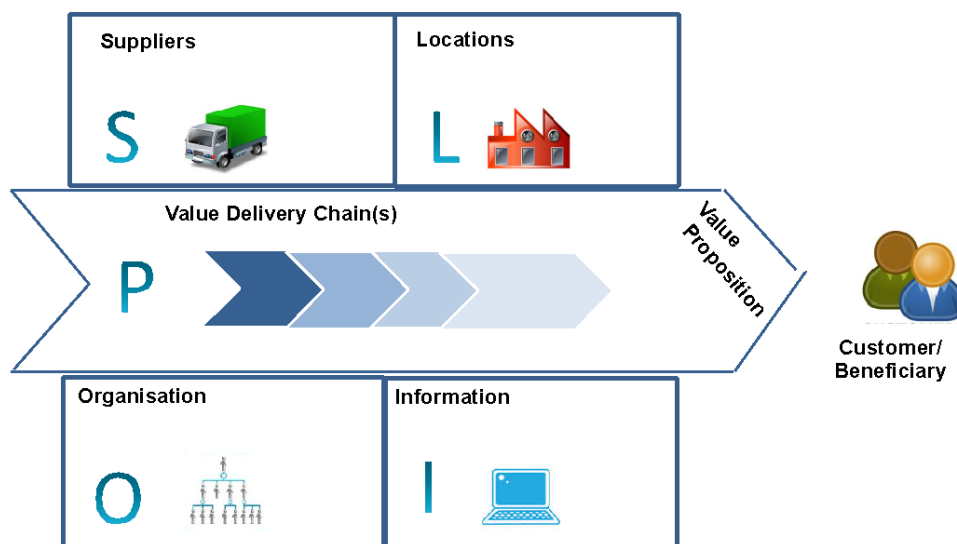


Figure 11: Operating Model canvas

³⁹https://en.wikipedia.org/wiki/Operating_model

⁴⁰https://en.wikipedia.org/wiki/Target_operating_model

⁴¹<https://www2.deloitte.com/lu/en/pages/strategy/solutions/target-operating-model.html>

⁴²<https://lionessmagazine.com/will-this-replace-the-business-model-canvas/>

⁴³“Target Operating Model: The world’s best introduction to operating model design.”

https://www.youtube.com/watch?v=Y09_nmsAX6o

⁴⁴<https://ashridgeonoperatingmodels.com/2014/02/24/95>

KPMG published their view⁴⁵ on the target operating model.

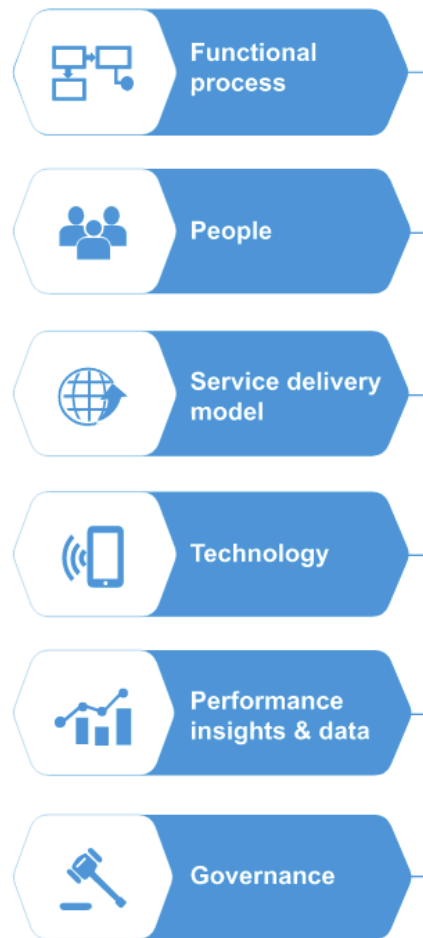


Figure 12: KPMG Target Operating Model

⁴⁵<https://home.kpmg/xx/en/home/insights/2020/08/kpmg-target-operating-model.html>

11 HR in the Business Model and Operating Model

HR is part of the Operating Model (Organisation), the Value Chains (HR Management and Operations) and the Business Model (key resources).

HR can be decomposed in many ways⁴⁶, one way is into the following elements:

1. HR Strategy
2. Employee Engagement
3. Talent Management
4. Total Compensation
5. Talent Acquisition
6. Performance Management
7. Learning & Development
8. HR Operations & Infrastructure

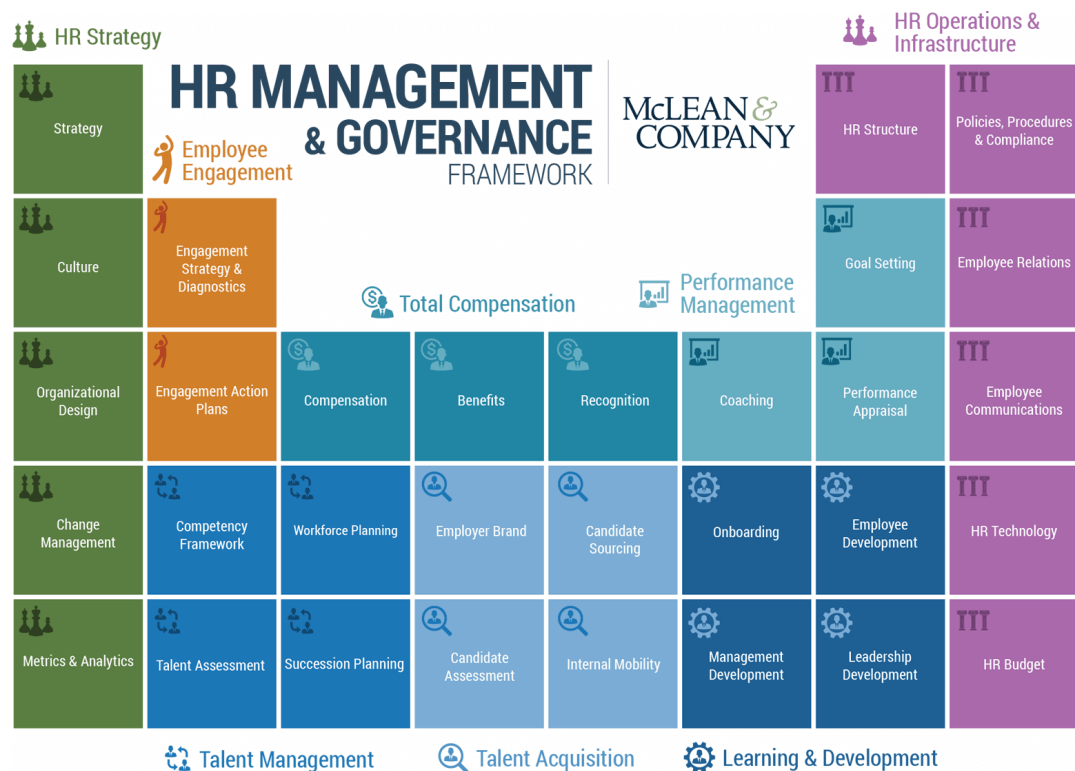


Figure 13: HR Management and Governance by McLean & Company

⁴⁶<https://hrtrendinstitute.com/2020/08/31/the-ideal-hr-organisation/>

Learning Organisation

To evolve, feedback loops are needed. Peter Senge⁴⁷ defines 5 topics in which you need to create feedback loops to enable an organisation to Learn.

1. If the people in the organisation are not empowered into **personal mastery** things will not get done and negative feedback is being created resulting in de-motivation, stress etc.
2. If the people in the organisation do not have a **shared mental model** of the internal and external world, there will be miscommunication, misalignment etc. And there will not be a positive outcome of actions based in the feedback loop. Since there is no alignment on the why, how and what.
3. If people in the organisation do not create together a **shared vision**, and build towards it, then there is no shared purpose. When it is a defined goal and not a co-created goal there is no intrinsic driver to improve in-line with the goal. This will result in all kinds of miscommunication, ethical issues etc.
4. Learning can only be done as a **team**, Since an organisation in itself is a collaboration of people. See the definition of an organisation and reassess what defines an organisation.
5. Everything is a connected collection of sub-**systems**. There is no isolation unless you deliberately define and decoupling into the extreme.

5 disciplines of Learning Organizations

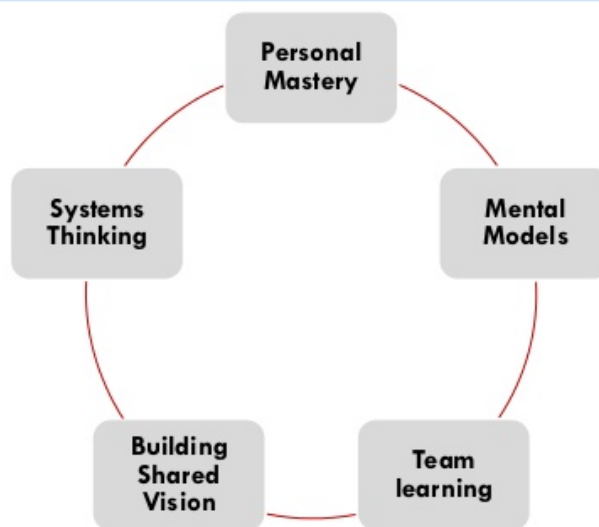


Figure 14: Five disciplines of a Learning Organisation by Peter Senge

⁴⁷Senge, 1990 - The Fifth Discipline,
<https://www.goodreads.com/book/show/255127>

High performance teaming

Research by google^{48,49} in their Re:Work⁵⁰ project covered many teams in many years and identified the differences between an average performing team and a high performing team. The factor with the most impact is that of psychological safety. The list is in order:

1. Psychological Safety
 - (a) psychological safety,
 - (b) physical safety,
 - (c) software safety,
 - (d) environmental safety,
 - (e) financial safety
 - (f) how safe they are to fail
2. Dependability
3. Structure & Clarity
4. Meaning
5. Impact



Figure 15: 5 factors that influence high performance teaming by Google, Re:Work

⁴⁸Re:Work / project Aristotle

<https://rework.withgoogle.com/print/guides/5721312655835136>

<https://rework.withgoogle.com/blog/five-keys-to-a-successful-google-team>

<https://rework.withgoogle.com/guides/understanding-team-effectiveness/>

<https://www.thinkwithgoogle.com/intl/en-gb/marketing-resources/content-marketing/five-dynamics-effective-team>

⁴⁹Modern Agile

<http://modernagile.org>

<https://www.slideshare.net/JoshuaKerievsky/modern-agile-keynote-at-agile2016>

<https://medium.com/agile-insights/make-safety-a-prerequisite-a-modern-agile-guiding-principle-6a053485b9a4>

<https://medium.com/serious-scrum/modern-agile-makes-safety-a-prerequisite-but-is-a-slippery-slope-if-you-like-scrum-59876372c6c8>

⁵⁰Lencioni's behaviour of a cohesive team in relation to Re:Work

<https://brain-smart.com/culture/counting-cost-trust>

Achieve personal safety

For a team to grow you need to learn (feedback loops), For learning you need the 5 elements of Senge, First you need personal safety (re:work) in the team, to achieve personal safety in the team you need TRUST^{51,52} between the team members.

TRUST is needed between people to achieve safety.

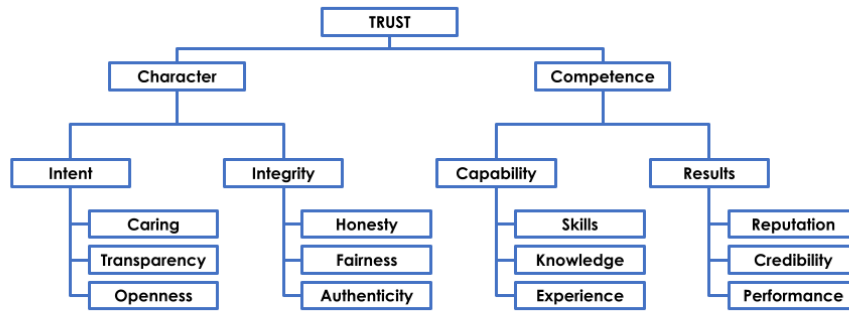


Figure 16: The TRUST framework to achieve personal safety

SCARF is needed for personal safety.

SCARF – A MODEL FOR COLLABORATING WITH AND INFLUENCING OTHERS

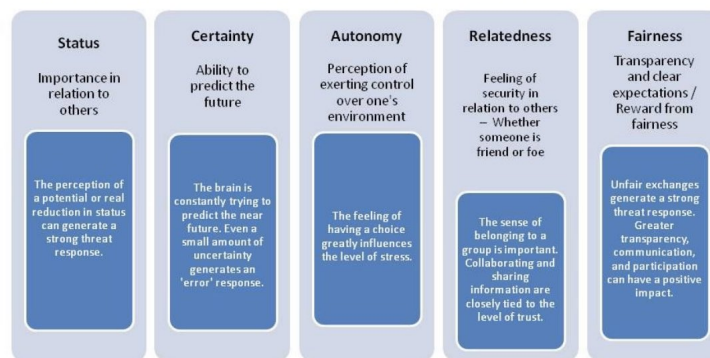


Figure 17: The SCARF framework to achieve personal safety

⁵¹Barrett, 2013-2019 Building A Culture of Trust
<https://www.slideshare.net/TalentDynamics/richard-barrett-building-a-culture-of-trust-trust-conference>
<https://www.tlnt.com/building-a-strong-team-it-really-takes-an-emphasis-on-trust>
<https://www.linkedin.com/pulse/trust-matrix-richard-barrett>
https://www.valuescentre.com/wp-content/uploads/PDF_Resources/Front_facing_articles/Values-Based-Leadership_-_Leading-from-the-Inside-Out.pdf
https://myctt.valuescentre.com/sites/default/files/uploads/Values-Based_Leadership.pdf

⁵²Rock, 2008 - SCARF <https://www.growthengineering.co.uk/scarf-model>

12 Risk Management and Resilience

EAL voor resilient organisaties

An organisation is a Complex Adaptive System.

To increase our value as an organisation we need to show Complex Adaptive System Resilience⁵³.

Engineering resilience and Systems Resilience will only restore and keep the status quo. and thus will not enable the organisation to grow in value.

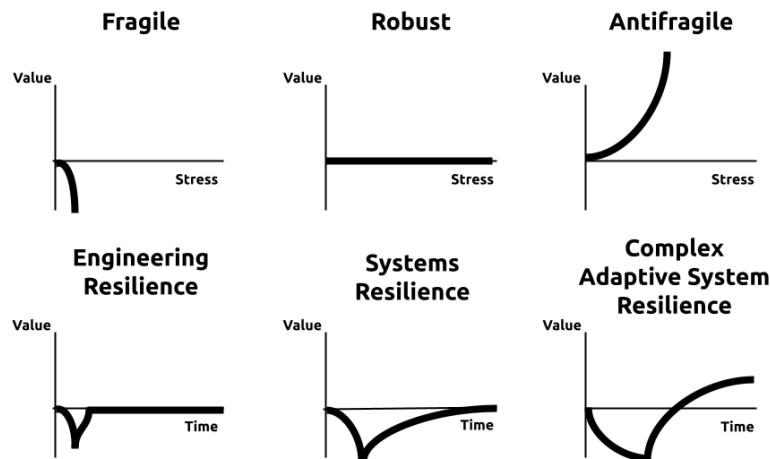


Figure 18: Three types of resilience (Martin-Breen 9999) and The Triad (Taleb 2012) combined by Botjes 2020,2021

All types of resilience are needed, there is a certain degree of system resilience needed to be able to evolve the complex adaptive system resilience.

CAS Resilience demands that change over time includes the autonomy/ mandate to:

1. Change what we do to deliver value (construction).
2. Change what we deliver as value (function).

The impact/ consequences to the organisational culture and governance for this mandate should not be underestimated.

⁵³Botjes, 2020 - Defining Antifragility and the application on Organisation Design
<https://doi.org/10.5281/zenodo.3719388>

Learning Organisation (Deming & Senge)

If an organisation wants to grow in value it is essential to learn. Learning is the feedback⁵⁴ loop of: Plan Do Check and ACT through the 5 elements of Singe.

Figure 1: The Plan-Do-Check-Act Cycle

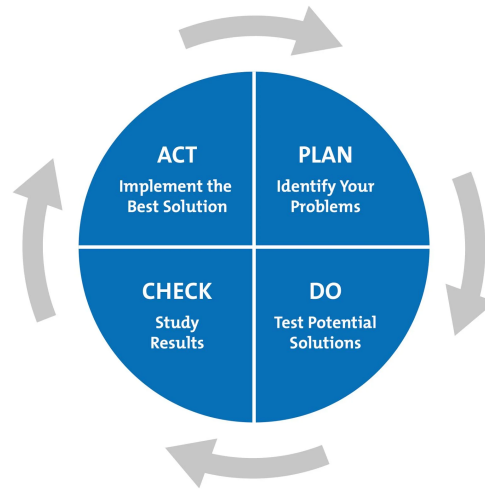


Figure 19: PDCA Model (Deming Circle) courtesy of The W. Edwards Deming Institute

If the organisations aims for CAS resilience, then to ACT the organisation needs to be able to change the what and the how. This is only possible to do when there is a minimal level of:

- a goal,
- a value proposition,
- a business model,
- a learning organisation in place.

If this is in place, Then the organisation can try to optimize in the topics of CAS resilience. The attributes related to CAS resilience are defined in the EAAL (fig. 20).

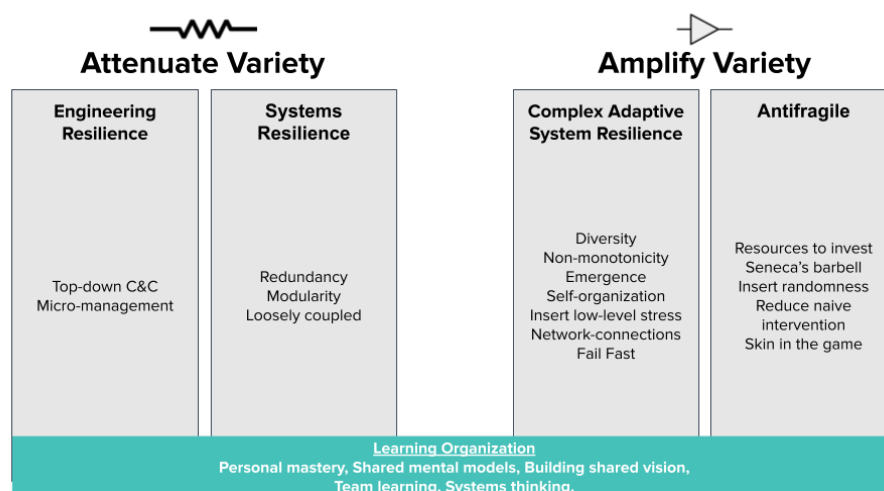


Figure 20: The Extended Antifragile Attribute List (EAAL) by Botjes 2020,2021

⁵⁴PDCA Deming Circle,
<https://en.wikipedia.org/wiki/PDCA>,
https://www.mindtools.com/pages/article/newPPM_89.htm

Security

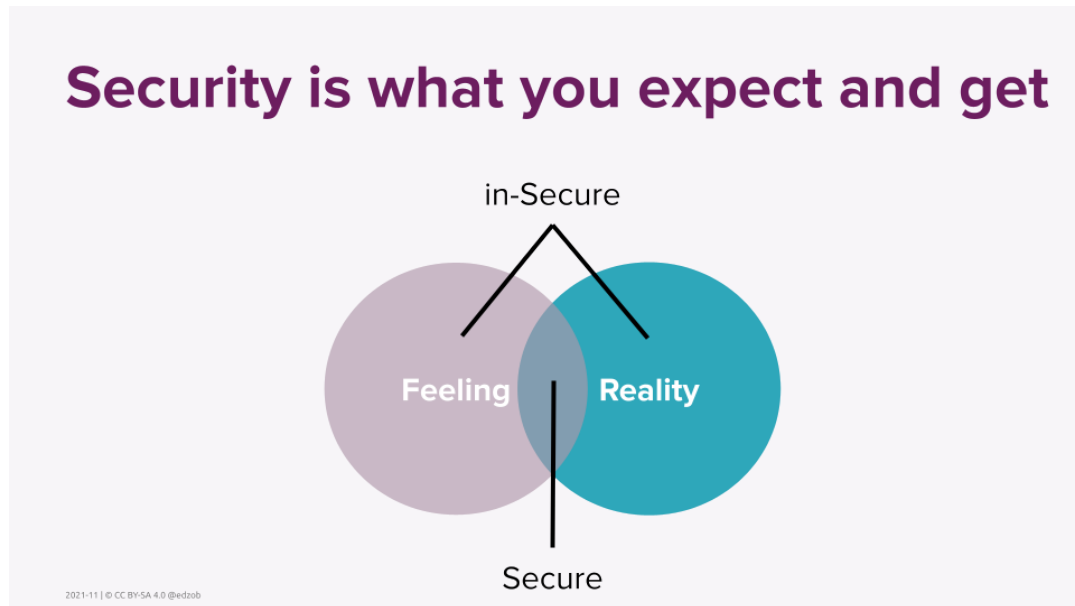


Figure 21: Security is what you expect and get

The essence of the concept security is the disjunct and overlap between reality and feeling⁵⁵. You can increase security by creating a validation between your feeling and reality. This might result in you needing to change your feelings to feel secure.

⁵⁵Club Cloud 2021 Webinar - Secure cloud, it ain't rocket science - Edzo Botjes

<https://www.youtube.com/watch?v=70D-QztvZYw>

<https://www.slideshare.net/edzob/cloud-security-it-aint-rocketscience-clubcloud-20211103>

Various meanings of the word security

Security in the context of an organisation has various ways how it is identified and organised as an organisational department/capability. At one hand there is IT security, then there is information security up until Risk Management and Business Continuity^{56,57,58,59}.

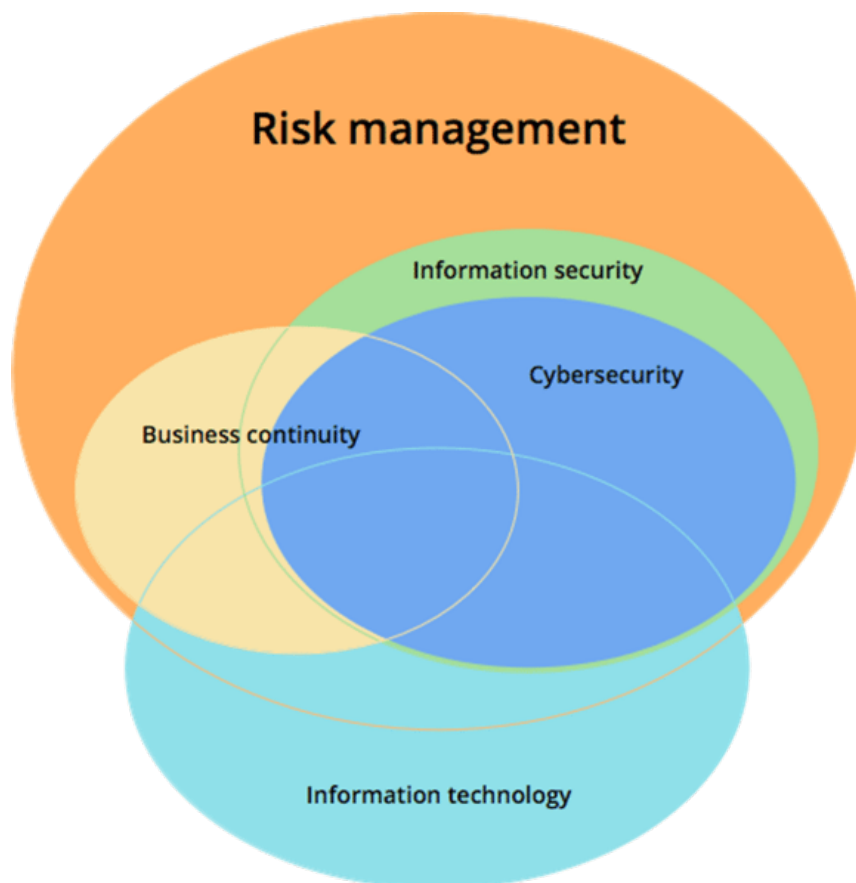


Figure 22: Venn diagram of Risk Management, Business Continuity, Information security, cybersecurity and information technology

⁵⁶The open Group, 2014 -

<https://www.slideshare.net/OpenGroupSA/enterprise-security-architecture-for-cyber-security>

⁵⁷Sekulovic, 2015 -

<https://www.researchgate.net/publication/308657802>

⁵⁸Koutic, 2016 -

<https://advisera.com/27001academy/blog/2016/10/24/where-does-information-security-fit-into-a-company>

⁵⁹Brightwell, 2017 -

<https://www2.cio.com.au/article/612456/how-assess-your-organisation-cyber-security-resilience>

Security mapped on the management levels

This mapping⁶⁰ helps in identifying the organisational stakeholders per topic.

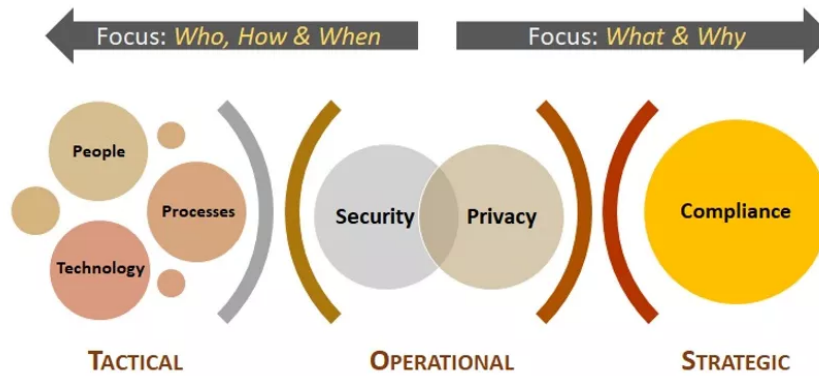


Figure 23: Security related topics plotted on operational, tactical and strategic domains.

For the context in the domain of Risk Management and Business Continuity see below.

⁶⁰Secure Controls Framework, Holistic Approach,
<https://www.securecontrolsframework.com/>

Risk Management

When addressing resilience, Antifragility⁶¹ and transformation, then you need to address Risk Management^{62, 63, 64, 65}. For risk management you can use the definition of ISO 31000.

(Risk management is the) identification, assessment, and prioritisation of risks (effect of uncertainty on objectives, whether positive or negative) followed by effective and economic application of resources to minimise, monitor, control, and assure the probability and/or consequence of negative events or to maximise opportunities⁶⁶.

ISO3100 defines risk management as follows and this has a big overlap with resilience and the learning organisation.

This helps in identifying the stakeholders to address for security improvement topics within the domain of risk management.

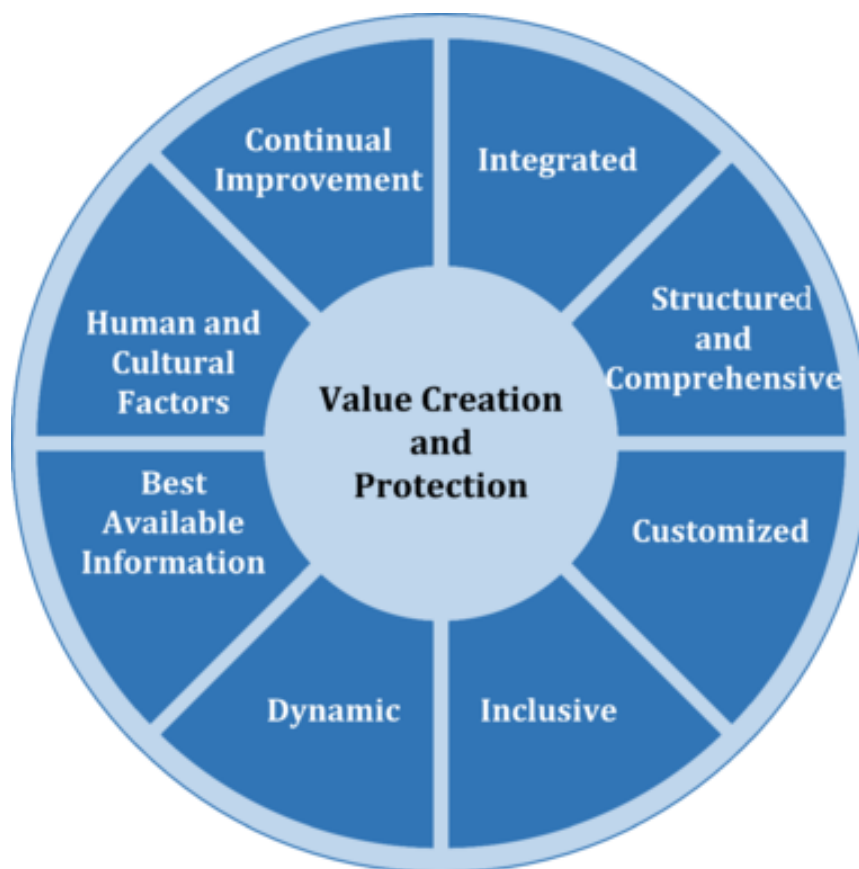


Figure 24: Value creation and protection topics from ISO31000 Risk Management

⁶¹Botjes, 2020 - Defining Antifragility and the application on Organisation Design
<https://doi.org/10.5281/zenodo.3719388>

⁶²Aven, 2014 - Risk, Surprises and Black Swans,
<https://www.goodreads.com/book/show/22330558>

⁶³Aven, 2011 - On some recent definitions and analysis frameworks for risk, vulnerability, and resilience,
<https://dx.doi.org/10.1111/j.1539-6924.2010.01528.x>

⁶⁴Aven, 2012 - The risk concept,
<https://dx.doi.org/10.1016/j.res.2011.11.006>

⁶⁵Aven, 2015 - The Concept of Antifragility and its Implications for the Practice of Risk Analysis
<https://dx.doi.org/10.1111/risa.12279>

⁶⁶Hutchins, 2018 - ISO 31000: 2018 Enterprise Risk Management,
<https://www.goodreads.com/book/show/42974780>