Implementing Innovations

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# Articles

1. ~~Blank, S., 2013. Why the lean start-up changes everything. Harvard business review, 91(5), pp.63-72. -~~ **~~Lieke~~**
2. ~~Ries, E. “What is the Minimum Viable Product” -~~ **~~Toby~~**
3. ~~Olsen, D., 2015. The lean product playbook : how to innovate with minimum viable products and rapid customer feedback. Hoboken: Wiley. Chapters 6 and 7 -~~ **~~Lieke~~**
4. Mayer, H., 2020. High ambitions for low code. - **Lajpreet**
5. ~~Drive Business Success with a Dual-Track Approach to Transformation. Harvard BusinesReview – Analytic Services, 2020.~~
6. ~~Sutherland, S., Schwaber. K., 2017. The Scrum Guide™ The Definitive Guide to Scrum: The Rules of the Game.~~ **~~- Joost~~**
7. ~~Malhotra, A., Majchrzak, A., Rosen, B., 2007. Leading virtual teams. Academy of Management Perspectives. 21, 60–70. - Laur~~
8. ~~Lauring, J., Jonasson, C., 2018. Can leadership compensate for deficient inclusiveness in global virtual teams? Human Resource Management Journal. 28, 392–409.~~ **~~Daan~~**
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## 

## 1. Why the lean start-up changes everything

Lean start-up favors experimentation over elaborate planning, customer feedback over intuition, and iterative design over traditional “big design up front” development.

* Business plans rarely survive first contact with customers
* No one besides venture capitalists and the late Soviet Union requires five-year plans to forecast complete unknowns. These plans are generally fiction, and dreaming them up is almost always a waste of time
* Start-ups are not smaller versions of large companies. They do not unfold in accordance with master plans. The ones that ultimately succeed go quickly form failure to failure, all the while adapting, iterating on, and improving their initial ideas as they continually learn from customers

**Key principles**

1. Rather than engaging in months of planning and research, entrepreneurs accept that all they have on day one is a series of untested hypotheses – basically, good guesses. Founders summarize their hypotheses in a framework called a *business model canvas*. Essentially, this is a diagram of how company creates value for itself and its customers
2. Lean start-ups use a “get out of the building” approach called *customer development* to test their hypotheses. They go out and ask potential users, purchasers, and partners for feedback on all elements of the business model, including product features, pricing, distribution channels, and affordable customer acquisition strategies. New venture rapidly assemble minimum viable products and immediately elicit customer feedback
3. Lean start-ups practice something called *agile development*, which originated in the software industry. Agile development works hand-in-hand with customer development. Agile development eliminates wasted time and resources by developing the product iteratively and incrementally. It’s the process by which start-ups create the minimum viable products they test.

The lean start-up methodology holds that in most industries customer feedback matters more than secrecy and that constant feedback yields better results than cadenced unveilings.

Lean start-up techniques were initially designed to create fast-growing tech ventures. But the concepts are equally valid for creating the mainstream small businesses that make up the bulk of the economy.

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## 2. Ries, E “What is a Minimum Viable Product?”

1. MVP looking at the core problem looking to be solved, give them the core general feature areas, look for early adopters of this type of solution
2. Just giving the key features and no more, early adopters give feedback.
3. Find the customers who find value in just the core features
4. Getting developers on the IMVU platform with a MVP
5. Developers don’t wanna be involved in a product with no customers, and customers don’t wanna hit a product that isn’t developed, so how is this solved?
6. They sold a beautiful grandiose story to the developers ab how great the platform would be to get them onboard
7. A non-MVP ... the Kerry vs Bush avatar
8. Was a shit idea, no one bought it, even free, no matter how much they changed it.
9. Turning Bush v Kerry avatar into an MVP
10. Create landing page that promised the product, create ad traffic, see if people want it
11. MVP is a way to experiment new ideas to your customers, since its just a core feature offer to see if they like
12. Rejecting false negatives: “but my customers don’t know what they want!”
13. Working with feedback, slowly making the product more sophisticated, iterating it, asking for more feedback, if it is still all no’s, then change direction .. maybe one day it isn’t viable!
14. Building products like packets get routed on the internet
15. Different features need different methods, different paths of deployment
16. Deploy first, code later
17. Choke points where you check “do ppl click this link?” or “does this link influence their behaviour, even if not clicked on?”
18. Do cohort based split tests to see the impact of a new feature / idea
19. Design first, code later
20. Paper prototypes, see that design works before coding
21. Where did you get money to experiment?
22. No “hockey stick” vibe, but raising money to test and make good changes, not looking to be saved

## 3. The Lean Product Playbook – Olsen, D. 2015

## **Chapter 6**

## For your MVP, you want to identify the minimum functionality required to validate that you are heading in the right direction. I call this an MVP *candidate* instead of an MVP because it is based on your hypotheses. You haven’t yet validated with customers that they agree that it is, in fact, a viable product.

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## For each benefit in your product value proposition, you want to brainstorm as a team to come up with as many feature ideas as you can for how your product could deliver that benefit.

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## You should be practicing divergent thinking, which means trying to generate as many ideas as possible without any judgment or evaluation.

## As your team brainstorms, try to build on each other’s suggestions and push each other to come up with even more creative and outlandish ideas.

## When you are done brainstorming, you want to capture all the ideas that your team generated, then organize them by the benefit that they deliver. Then, for each benefit, you want to review and prioritize the list of feature ideas.

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## User stories (used in Agile development) are a great way to write your feature ideas to make sure that the corresponding customer benefit remains clear. A user story is a brief description of the benefit that the particular functionality should provide, including whom the benefit is for (the target customer), and why the customer wants the benefit. Well-written user stories usually follow the template: As a [type of user], I want to [do something], so that I can [desired benefit].

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## Once you have written high-level user stories for your top features, the next step is to identify ways to break each of them down into smaller pieces of functionality—what I call “chunking.” The goal is to find ways to reduce scope and build only the most valuable pieces of each feature.

## The tactic of breaking features down is consistent with the Lean manufacturing best practice of working in small batch sizes. When a product is being manufactured in a factory line, the batch size is the number of products being worked on together at the same time (at each step of the manufacturing process).

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## In many forms of Agile, once you’ve written the user stories, the team discusses each one and the developers estimate the amount of effort required. They often do so by using story points, a type of currency for estimating the relative size of different user stories.

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## This is a good time to introduce the concept of return on investment (ROI). So far, you have only prioritized based on how much customer value you believe each feature will create. You haven’t yet taken into account the amount of resources required to build each feature. After you have finished chunking your feature ideas, you should perform a second-pass prioritization that accounts for both the value and the effort.

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## Once you are done chunking, scoping, and prioritizing, you can create a simple grid that lists the benefits from your value proposition and that lists, for each benefit, the top feature ideas broken into chunks.

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## **Chapter 7**

## Once you have specified the feature set for your MVP candidate, you’ll want to test it with customers. In order to do that, you need to create a user experience (UX) that you can show to customers, which is the top layer of the Product-Market Fit Pyramid.

## The goal is to build a prototype that lets you test your hypotheses.

## By using the term “MVP tests” instead of MVP, the debate goes away. This allows more precise terminology by reserving the use of MVP for actual products.

## The first way you can categorize MVP tests is by whether they are aimed at testing your product or your marketing.

## The second dimension on which MVP tests differ is whether they are qualitative or quantitative. Qualitative means that you are talking with customers directly, usually in small numbers that don’t yield 92 The Lean Product Playbook statistical significance. Here, you care about the detailed information you learn from each individual test. Quantitative research involves conducting the test at scale with a large number of customers. You don’t care as much about any individual result and are instead interested in the aggregate results.

## - Hand sketches vs. wireframes

## - Mockups > interactive prototype (clickable mockups)

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## 4. Mayer, H., 2020. High ambitions for low code.

## 5. Jennings (2020) - Drive Business Success with a Dual-Track Approach to Transformation.

[**https://hbr.org/resources/pdfs/comm/DriveBusinessSuccess.pdf**](https://hbr.org/resources/pdfs/comm/DriveBusinessSuccess.pdf)

“Digital transformation” appears to be something that companies are still struggling with. But most agree that success requires an approach that *combines* innovation at both the enterprise- and critical business-process levels.

**Dual-track transformation*:*** An approach that simultaneously addresses enterprise-wide transformation as well as the modernization of processes that flow across business workflows and workgroups.

- *Enterprise-wide*: Focuses on identifying and implementing new digital technology throughout an organization, while simultaneously attempting to change cultures and business workflows impacted by digitization. This is important, but complex and time consuming. It takes a long time to come to fruition.

- *Critical business*-*process*: Fills the gaps left by grand-scale transformation plans, focusing on a comprehensive collection of workflows that run within and across business units. Is equally as important. Because this is more targeted, it can quickly yield business value. It relies on the people who manage or use those workflows, since they can have unique insights, because of their daily use. Categories of workflows:

o Unique processes developed to foster competitive advantage, such as call-center resources

o Critical processes such as accounts payable, purchasing etc. Areas that represent the lifeblood of enterprises.

A dual-track approach can reduce risks associated with transformation plans. Those usually span across a long time and can encounter unexpected factors that can derail plans. Furthermore, transformative plans are often supported by an emerging technology which is not yet well understood by the company or requires modernization, which delays moving from small pilots to enterprise-wide implementations.

To succeed you do need:

- A framework for enforcing security policies

- Close collaboration among IT and business staffs

- A plan for managing the cultural challenges that arise when transformation becomes part of everyone’s job description

**Rapid-cycle innovation**: Also called ‘innovation at the edge’. Empowers business professionals outside IT to propose and create new applications for existing workflow processes to achieve quick wins and supporting long-term transformation efforts. To fulfil this promise, low-code platforms can be used. More than half of the respondents in the survey said low-code platforms can encourage business professionals and business-process managers to be more involved in innovation and idea generation.

**Challenges** of rapid-cycle innovation:

- Security and compliance gaps, applications created outside the IT department may not fully meet the security and governance requirements

- Low-code applications won’t be robust enough to meet intended business needs

- Platforms don’t live up to their promise of making it possible for business professionals to successfully develop viable applications

However, these concerns aren’t insurmountable. Key is to create a framework that brings members of IT together with principal members of manufacturing, marketing, R&D etc. that could benefit from low-code platforms.

## 6. The Scrum Guide (Sutherland & Schwaber, 2017/2020)

* Scrum: A framework within which people can address complex adaptive problems, while productively and creatively delivering products of the highest possible value.
* Scrum is lightweight, simple to understand, but difficult to master.
* Scrum proved especially effective in iterative and incremental knowledge transfer. Scrum is now widely used for products, services, and the management of the parent organization.
* The essence of Scrum is small teams of people; those teams are flexible and adaptive.
* Scrum employs an iterative, incremental approach to optimize predictability and control risk.
* Three **pillars** sustain every implementation of empirical process control: *transparency, inspection, and adaptation*.
  + Transparency: significant aspects must be visible to those who are responsible for the outcome. Those aspects should be defined by common standards.
    - For example, a common language
    - A shared definition of ‘done’
  + Inspection: frequently inspect Scrum artifacts and progress towards a sprint goal, but not so frequent that it gets in the way of the work.
  + Adaptation: if the inspector finds aspects that deviate outside acceptable limits, adjustments should be made as soon as possible.
* When the **values** of commitment, courage, focus, openness and respect are embodied and lived by the Scrum Team, the Scrum pillars come to life and build trust for everyone.
* The **Scrum Team** consists of a Product Owner, the Development Team, and a Scrum Master. Scrum Teams are self-organizing and cross-functional. The team model in Scrum is designed to optimize flexibility, creativity, and productivity.
  + **The product owner**: responsible for maximizing the value of the product resulting from work of the Development Team. He/she is responsible for managing the Product Backlog. The Product Owner may delegate work, but remains accountable.
  + **The Development Team**: consists of professionals who do the work of delivering a potentially releasable Increment of “Done” product at the end of each Sprint. Teams are self-organizing, cross-functional and non-hierarchical. The size of the teams should be between 3 and 9; not too small, not too large.
  + **The Scrum Master**: responsible for promoting and supporting Scrum as defined in the Scrum Guide.
* **Scrum Events**: Prescribed events are used in Scrum to create regularity and to minimize the need for meetings not defined in Scrum. These events are specifically designed to enable critical transparency and inspection. The duration is fixed.
* **The Sprint**: The heart of Scrum is a Sprint, a time-box of one month or less during which a “Done”, usable, and potentially releasable product Increment is created. During the sprint:
  + No changes are made that would endanger the Sprint Goal
  + Quality goals do not decrease
  + Scope may be clarified and re-negotiated between the Product Owner and Development Team as more is learned.
    - Sprints are rarely cancelled, only the Product Owner can, if goal has become obsolete
* **Sprint Planning**: The work to be performed in the Sprint is planned at the Sprint Planning by the entire team. It is restrained to eight hours for a one-month sprint.
  + Topic One: Why is this Sprint valuable? > Sprint Goal
  + Topic Two: What can be done in this Sprint?
  + Topic Three: How will the chosen work get done ?
* **Sprint Goal (commitment)**: a single objective for the sprint.
* The **Sprint Goal**, the Product Backlog items selected for the Sprint, plus the plan for delivering them are together referred to as the **Sprint Backlog**.
* **Daily Scrum**: a daily 15-minute event for the Development Team to plan the next 24 hours.
* **Sprint Retrospective**: plan ways to increase quality and effectiveness. The Scrum Team inspects how the last Sprint went with regards to individuals, interactions, processes, tools, and their Definition of Done.
* **Scrum Artifacts**: represent work or value. They are designed to maximize transparency of key information. Thus, everyone inspecting them has the same basis for adaptation.
* **Product Backlog**: an emergent, ordered list of what is needed to improve the product. This list is constantly refined, by adding details etc.
* **Product Goal (commitment)**: a future state of the product which can serve as a target to plan against.
* **Increment**: a concrete stepping stone toward the Product Goal. Work cannot be considered part of an Increment unless it meets the Definition of Done.
* **Definition of Done (commitment**): a formal description of the state of the Increment when it meets the quality measures required for the product.

## 7. Malhotra, A., Majchrzak, A., Rosen, B., 2007. Leading virtual teams.

While some research studied virtual leadership in laboratories, a large-scale field study of how virtual team leaders manage the joint challenges of dispersion and innovative problem-solving is yet to be reported. Based on observations, interviews and survey data collected over 7 years with 55 successful virtual teams at 55 different companies, this paper identifies six leadership practices of effective leaders of virtual teams.

**Virtual teams** - Teams whose members are geographically distributed, requiring the to work together through electronic means and little face-to-face interaction.

● Often consist of cross-functional members working on highly interdependent tasks and sharing responsibility for team outcomes.

● More and more, their deployment requires team-based innovation to leverage and integrate diverse expertise and generate innovative product, process or business strategy

● Members are valuable and thus often work on multiple teams simultaneously, many of which are geographically collocated. Thus, traveling for face-to-face meeting is counterproductive, taking members away from local constituency

Leaders of all teams - dispersed or collocated - have a number of responsibilities including: articulating a vision for the team, communicating it with passion, setting execution plans, forming coalitions, aligning others behind the vision and shaping team culture; This is done through:

- electing and motivating the right members for the teams,

- establishing the right norms of behaviors,

- encouraging social events,

- building trust, setting goals,

- preparing the team to anticipate and cope with novel situations,

- fostering internal communications,

- and recognizing contributions.

However, this is much more difficult without a physical presence. For example, they cannot physically observe when the team is getting sluggish, needs a social event to rebuild momentum, needs focus and direction, and when the team needs resources → have to be creative in setting up structures and processes so that **variations from expectations can be observed virtually.**

● Cannot assume that members are prepared, that silence isn’t inattention

● Have to ensure insure diverse knowledge is fully utilised

**1. Establish and Maintain Trust through the Use of Communication Technology**

“The quickest ways to build trust in a virtual team is to play fair and deliver on your promises."

● Focusing the **norms on how information is communicated**

○ In virtual teams, trust is often based on actions, rather than goodwill. Because goodwill is hard to observe, **actions and expectations** about actions need to be made **explicit and visible**.

○ Several of the teams we studied struggled initially because they lacked a **common set of procedures or way of doing things,** which often led to team members communicating in their own way, and thus not adequately sharing information with other team members. This resulted in a lack of cohesion and difficulty in integrating the work of different team members.

○ **Norms describe how communication technology should be used** – e.g. how often to check the knowledge depository, ensure that the team room is active, deciding what and when to post to avoid information overload and support coordination, how to comment, who owns documents for revisions, how to inform others on your whereabouts and etiquette for electronic communication (e.g., prefacing verbal comments with one’s name to avoid confusion over who is talking)

○ Trust can be harmed by unauthorised sharing. One team had an external communication norm restricting members from conveying negative information to outsiders, another "locked out" managers from workspace, and most teams had an "external-facing" website for sharing documents (upon team discussion)

● **Revisiting and adjusting the communication norms as the team**

○ **“Virtual-get-togethers"** (periodical or as-needed) used to re-examine norms and renew a sense of purpose, reinvigorating their shared identity and direction as a team.

○ Team leader planned these based on a “virtual” sense, based on clues such as participation lapses in asynchronous electronic discussions, and terse and potentially divisive electronic communications

● **Equal "suffering" in the geographically distributed world**

○ Team leaders rotated the times at which week audio-conferences were held so that everyone (at some point in the team's life cycle) would experience the pain of a late night or early morning meeting.

● **Making progress explicit through use of team virtual workspace**

○ Leaders of successful virtual teams required their members to regularly **post their work outputs in the team repository** and electronically link it to action item lists and project timelines.

**2. Ensure Diversity in the Team is Understood, Appreciated and Leveraged**

● Prominent team **expertise directory and skills matrix** in the virtual workspace

○ Face-to-face teams would learn what they needed to know for good collaboration over dinner and drinks, but the virtual team members can use an **electronic directory.**

○ The directory can include a photo of each member along with information about his or her training, experience, previous assignments, and professional association affiliations.

○ Other team leaders placed a skills matrix of the team in a visible location on the team's virtual workspace to remind everyone on the team of the "**deep local domain expertise**" that each member brought to the team.

● **Virtual sub-teaming** to pair diverse members and **rotate sub-team members**

○ Pairs are often **geographically distributed and functionally diverse**, based on who could benefit the most by learning from each other. Such combinations would not be possible in collocated teams.

○ Redistributed after task to avoid ingroup-outgroup fault lines often observed in virtual teams.

○ Excellent way to **break down cultural stereotypes** and o**vercome communications barriers** in multicultural teams

● **Allowing diverse opinions to be expressed through the use of asynchronous electronic means (e.g. electronic discussion threads)**

○ In most traditional face-to-face collaborations team members wait until face-to-face or synchronous (such as all-team audio conferencing) meetings to brainstorm and make progress on the innovation task.

○ Successful virtual teams use the time between meetings to asynchronously ( through use of electronic discussion threads and annotation of documents in the repository) generate and evaluate ideas.

○ Thus, virtual team members can pick and choose when they can make their contributions, allowing members to have a different rhythm and pace of generating their own ideas and digesting others' ideas. Leaders also use asynchronous discussion threads to identify areas of disagreements because these give members with different language capabilities time to share their thoughts in their non-native languages in ways that they find difficult in synchronous (fast-paced audio-conference) sessions.

**3. Manage virtual work-cycle on meetings**

"The challenge was to command member attention and focus in an era of multi-tasking."

Live meetings are the life-blood of the group and are often mandatory to keep everyone in the loop, keeping members excited and aligned. To avoid detraction, clear agendas must be set and communicated in advance (practices for orchestration are detailed below). **“Attention-span” in virtual meetings can be optimised by treating them as an opportunity to instil creativity, focus, and enthusiasm.**

Pre-Meeting Practices

● All idea divergence between meetings (asynchronous idea generation) and idea convergence and conflict resolution during virtual meetings (synchronous idea convergence)

● Begin electronic discussion thread about group activities prior to conference and summarise disagreements to be raised in the meeting

● Circulate clear agendas and time allocation

● Ensure members post progress linked to timelines, action item lists and responsibility charts prior to meeting

Start of Meeting Practices

● Use the start of virtual meeting (each time) **for social relationship building to “reconnect”,** which helps remind each member of their similarities and provide"boundary objects" or common metaphors to work from during the meeting – e.g. have members share a personal story, hobby, major events in one’s life

During Meeting Practices

● **Ensure through "check-ins"** that everyone is engaged and heard from through e.g. voting tools, instant messaging, etc.

End of Meeting Practices

● **Create commitment by ending with a list of action items and "minutes-on-the-go" practices** (minutes are logged during the meeting and appear immediately on the virtual workspace screen; done by rotation; only results i.e. decision and rationale are captured) and then posting them to the team repository

Between Meeting Practices

● Keep members engaged through discussion threads, instant messaging, spontaneous announcements on the team's website and automatic notifications of recent postings.

**4. Monitor team progress through the use of technology**

● Closely scrutinize asynchronous and synchronous communications patterns to determine who is participating in team activities and who needs support and prompting for further participation e.g. emailing noncontributors, coaching members, assigning “facilitators” to keep track of tool usage and report issues, identifying and addressing “social loafing”.

● As a team, use of tools (what and how) is often trial and error and requires a willingness to experiment, fail and accept some responsibility to make it work.

**5. Enhance external visibility of the team and its members**

Virtual team leaders must remain sensitive to the needs of various external stakeholders including project sponsors, local executives, and both internal and external customers of the virtual team's output.

● Make progress explicit through balanced scorecard measurements pasted in the team's virtual workspace. These are developed with each member’s primary local manager to ensure clear expectations. Once established, it provides an objective and standardized reward metric on team level.

● Frequent report-outs to e.g. a virtual steering committee of local bosses of team members that are responsible for their motivation. Alternatively, "report out" to the sponsoring manager closest to the functional, geo-graphical, or business unit that the individual member represented.

● The choice of approach depends on the preferences of management, type of tasks and team members’ abilities. Regardless of the approach selected, leaders often approved reports first by all team members so that they feel a part of the report-out process.

● Virtual team leaders often have to explain to managers the value of a member to the team (e.g. one leader created "certificate of contribution" clarifying how the individual's contribution to the team would help the manager's own division)

● It is even more difficult to recognize the contribution of virtual team members than face-to-face teams, but by keeping virtual team members in the corporate spotlight, the rewards and recognition follow.

**6. Ensure individuals benefit from participating in virtual teams**

For team members to contribute, they must believe that they personally benefit from the team. **Virtual reward ceremonies** with gifts and virtual parties

● Individual recognition at the start of each virtual meeting (e.g. gold stars to be leveraged for future promotions)

● Making each team member's "real location" boss aware of the member's contribution (e.g. when presenting to an executive, ask them to relay feedback to the member’s “real location” boss)

● Regardless of up-front time commitments, team members gravitate to those commitments that give them the greatest benefits (intellectual growth, visibility, and fun). Capitalise on these topics with mini-lectures on related topics provided by an expert, short on-line appearances by executives (for networking) and fun activities like hobbies, sharing catered lunches, scavenger hunts and virtual celebrations

**Final words**

Virtual team leaders must **overcome coordination barriers** when working across distance and time, **cross cultural and language barriers** and **trust and team cohesion barriers** created when team members have very **limited opportunities to identify common values**. In order to overcome member feelings of isolation:

- build team cohesion,

- establish norms of collaboration and knowledge sharing,

- and motivate team members to make a major commitment to the team's mission,

- leaders must have new leadership skills.

As one virtual team leader noted, "I must be a diplomat to help teams overcome cultural differences, an ambassador to keep sponsors around the world updated on the team's progress, a psychologist to provide a variety of rewards to a diverse and often isolated group of team members, an executive, a coach, and a role model all at the same time." Another noted, "Leadership in my book comes down to communication. But communicating in person and communicating electronically are not the same. *It is hard to motivate and inspire from a long distance.*

Given these challenges, payoffs need to be substantial for an organization to embrace this relatively new way of working. Because virtual teams have access to specialized expertise across geographical boundaries, they are poised to develop better informed and more creative solutions to complex, often global organizational problems. By including members from 15 European countries, one team was able to create a solution that was customized for the different regions, yet had 70% commonality. **This "think global, act local" solution reflects the creative capacity of virtual teams.**

Recent research indicates that only a small number of organizations have created specialized training programs to prepare virtual team leaders and virtual team members and an even smaller number rate their programmes as effective. Similarly, we would expect business schools to focus more on developing the critical competencies needed to lead project teams from a distance, by, for example, working cross-culturally and virtually under coaches that point to "teachable moments'' when they encounter project management issues.

## 

## 8. Lauring, J., Jonasson, C., 2018. Can leadership compensate for deficient inclusiveness in global virtual teams?

**Line managers** in today's business environment more and more take on the HRM function of emphasising *leadership culture*, *communication*, and *motivation* to advance organisational performance through employees.

This paper assesses the role of leadership in providing these functions while working in virtual teams.

→ This is especially important because virtual teams suffer from feeling more distant, anonymous as well as confused and without a clear sense of purpose.

Also group functioning is less in virtual (global) teams:

* Less social coherence and different inclusive attitudes
* Due to: highly cultural and linguistic diversity (*Linguistic differences attribute more to collaboration difficulties than culture*)

→ Leadership is trivial in regards to managing HR correctly in this fashion

* This study aims to find out whether **inspirational motivational leadership** can compensate for a lack of **inclusive attitudes** (in the form of openness to language diversity)

Terminology:

**Inclusive group attitudes**: Spatial dispersion and cultural / linguistic heterogeneity reduces team cohesion (thereby team performance). Certain inclusive group attitudes alleviate these difficulties, i.e: *shared openness and tolerance towards internal (dis)similarities* → (acceptance of both the similarities and the differences of a group).   
In virtual teams a positive social atmosphere, and a feeling of equality and connectedness are extremely important and therefore these attitudes are trivial for group performance.

**Openness to language diversity**: language diversity can lead to reduced and more shallow interaction. AND communication will be biased towards individuals who speak their native language.   
Openness to language diversity is therefore trivial in avoiding subgroup formation and sustaining engagement from every group member.

**Inspirational motivation and management by exception:** Leading through idealised charismatic influence & inspiration (a dimension of transformational leadership) is effective for mobilising human resources over a distance. Because it does not focus on control (transactional leadership) but rather on guidance of team members by proactively articulating a shared goal.

→ inspirational motivational leadership helps to build team members' sense of collective value and team identification. And it is based on proactively motivating the team towards a direction.

→ management by exception entail that leaders only interfere with the team's actions when performance criteria are not met or something goes wrong. But mostly it relies on self governing team activity.

**Superordinate goals**: goals that are compelling to all group members and can be attained only through joint forces.

This promotes shared affort and shared task goals which might not decrease natural discrimination of differences between group members, but can override them.

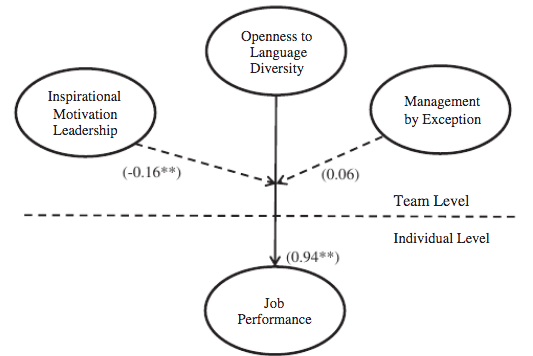
Hypothesis:

H1: *There is a positive association between a team's openness to language diversity and an individual team members job performance.*

H2: *The relationship between a team’s openness to language diversity and an individual team members job performance is moderated by inspirational motivational leadership, such that lack of openness to language diversity has a weaker negative effect on performance when inspirational motivation leadership is strong*.

H3: *Compared to inspirational motivational leadership, management by exception has a waker moderating effect on the relationship between a team’s openness to language diversity and an individual team member’s job performance so that management by exception will compensate for lack of openness to language diversity to a lesser degree.*

Results (all hypotheses correct):



## 9. Bonet, R., Salvador, F., 2017. When the boss is away: Manager-worker separation and worker performance in a multisite software maintenance organization. Organization Science 28, 244–261.

Authors claim that the effect of manager–worker separation on worker performance varies depending on three factors: task complexity, collocation of the worker with experienced peers, and manager supervisory experience.

Research contends that manager-worker separation potentially reduces the effectiveness of the relationship between them for three main reasons:

1. **Physical distance** hinders transmission of **verbal and nonverbal cues**, filtering out information that can have a bearing on task execution. It also makes it impossible for the manager to “*manage by walking around*”, a practice that is found to enhance a manager's ability to help workers in problem solving.

2. Physical distance **reduces the immediacy** of manager-worker interactions, making task execution slower and less accurate. For example, feedback cannot be provided simultaneously with the delivery of the message, increasing the time managers and workers need to achieve a shared understanding on task-related issues. (Also a problem in goal-setting)

3. Physical distance **reduces opportunities for social**, non-task contact and informal interaction between manager and worker, making it harder for managers and workers to build rapport and trust.

The authors hypothesize that the costs of manager-worker separation are greater when workers are more in need of manager support. This is usually the case when the task is *complex*, or when the workers lack collocated expert peers who can act as substitutes for the manager.

Also, costs would be higher when workers are led by more experienced managers, because distance tends to suppress the ability of managers to capitalize from previous experience in leading workers.

No support is found for a negative interaction between amount of collocated expertise in the *unit* of the worker and the performance effects of manager-worker separation, but support is found for a negative interaction between proportion of collocated *project team members* and manager-worker separation. This suggests that costs of the M-W separation are weaker when a greater proportion of project team members are collocated with the focal worker.

One interesting finding was that when a worker is collocated with most other team members, reporting to a remote manager actually improves worker performance. This finding suggests that collocation with other team members can substitute for manager collocation.

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## 10. Case: Uber and Stakeholders: Managing a New Way of Riding

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## 11. Bridoux F., Stoelhorst J.W., 2014 Microfoundations for stakeholder theory: Managing stakeholders with heterogeneous motives.

## Thesis: How to treat stakeholders for sustained value creation

## **2 approaches:**

## Fairness approach

## Divided value creation among the different parties

## As well as equal division of outcomes (fair sharing of gains)

## Fair interpersonal treatment of stakeholders

## Openness in information sharing

## Open collaboration

## Less detailed formal contracts, in terms of poorly defined performance standards → they evolve over time (more focus on trust and social sanctions instead of legal enforcement)

## Long lasting relationships between stakeholders

## Arms-length approach

## Based on who has the highest bargaining power

## None equal division of value creation, division of outcomes & treatment of interpersonal stakeholders

## More reliance on secrecy & information asymmetries

## Resolving problems through confrontation

## Playing stakeholders off against each other to weaken their bargaining position

## Contracts more enforced in the form of legal sanctions

## Motivation of stakeholders based on strong outcome-based financial incentives (bonusses etc)

## Short-term relationships among stakeholders

## \**stakeholder management can be a source of differentiation in the competition*.

## 

## **Types of stakeholders:**

## Self-regarding

## Care about personal payoffs and do not value fairness

## Reciprocal

## Reward fair, and punish unfair treatment (even if rewarding or punishing is personally costly)

* article also describes these as ‘individualists’ and ‘prosocials’

Findings (duh): Fairness approach works when attracting, retaining and motivating reciprocal stakeholders. Arms-length approach works when attracting, retaining and motivating self-regarding and high bargaining power stakeholders

## The firm is a nexus of relationships among its primary stakeholders with the objective to create value.

## **Value** **creation** = difference between customers’ willingness to pay for the firm’s products and the sum of the payments stakeholders would receive if they joined the best alternative nexus of relationships

## 

## Example Ryanair & Southwest airlines:

## Ryanair not fair to stakeholders, very criticized for it: But still creates value

## Southwest is very fair, upfront and sustains strong relationships with stakeholders: Regarded as one of the best employers in America and this approach is said to be one of the reasons for the airlines success

## How can they both sustain success? → answer for yourself!

**Motivational effects of different stakeholders**

## Whether stakeholders are self-regarding or reciprocal implies their degree of interaction (how hard working, whether customers spend time on providing feedback, etc.).

* Reciprocators view behaviors on a ‘moral’ dimension (what is good/bad)

## Self-regarding individuals tend to interpret behavior along the ‘effectiveness’ dimension.

This has implications on how stakeholders treat you and treat other stakeholders:

* Reciprocators may stop cooperating once they find out that fairness in the value chain is not upheld → they themselves care if someone in the nexus of relationships doesn't get what they want
* Self-regarding individuals are no longer upset when it becomes clear that their individual payoffs are unaffected by others’ noncooperation → they don't care as long as they get what they want

Also motivational factors are influenced in that sense:

* Reciprocators are motivated to create more value by fair traitement alone
* Reciprocators are motivated to create LESS value when they feel an arms-length intent → i.e. financial rewards/sanctions damage reciprocators’ voluntary contributions (they interpret financial signals as hostile intent → leads to distrust)
  + This goes as far that strong reciprocators might may actively destroy value
* Self-regarding stakeholders are motivated purely out of self-serving
* Monetary benefits increases motivation of self-regarding stakeholders

## 

**Sorting effect of different stakeholders**

The ‘self-selection’ effect that stakeholders choose and switch between nexus of relationships dependent on satisfactory treatment (what is satisfactory is dependent on the sort of stakeholder)

* Reciprocators switch if they are not treated fair and consistent
* Self-regarding only switch if their personal benefit is better somewhere else
* Reciprocators might not switch even if their personal benefits are somewhere else better, if that switch means switching to a less fair nexus of relationships
* Interesting note: Self-regarding stakeholders might choose for a fairness nexus, only when their own bargaining power is low → they will be treated independently of their bargaining power in a fairness approach nexus.

**Sustaining value creation**

* This sorting/selecting effect is also very important for sustaining value creation: Selecting the right stakeholders for your nexus ensures that other valuable future stakeholders are also more likely to join because they identify with the nexus (and vise versa: selecting the wrong stakeholders is detrimental for future growth)
* Fair treatment of stakeholders provides a better basis for responding to change: -Reciprocal stakeholders can help the firm to seize opportunities (by more value creation) or to recover from a crisis (even if the crisis affects them negatively)   
  -Arms-length treatment should not count on its stakeholders’ support to deflect threats or seize opportunities: self-regarding stakeholders are likely to decrease their contributions or leave the nexus when the firm faces external change that negatively affects their personal outcomes.
* On the flip side, a firm that has consistently treated stakeholders fairly has a more limited repertoire of actions → many changes/actions can be viewed as unfair by the stakeholders, leading to them leaving the nexus (and decreased value creation)

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## 12. A conceptual framework for tackling knowable unknown unknowns in project management.

A project is a “ temporary endeavour undertaken to create a unique product, service, or result”. Two characteristics distinguish projects from operations in general:

* Projects are relatively temporary and finite;
* Projects are unique.

These two characteristics - the increased novelty and the reduced time frame bring more challenges with respect to unk-unks. Therefore, a major challenge in project management is dealing with the uncertainties within and sorrowing a project that gives rise to outcomes that are unknown or known only imprecisely. Of course, these uncertainties can have both negative and positive effects. If they are positive, we call them opportunities, if they are negative, we call them risks. We can therefore state that successful project management has to do with both managing risks and opportunities.

In this paper, the focus is on UNKNOWNS which are value neutral and that can be divided in two categories:

**Known unknowns:** uncertainties of which the PM is aware and to which the techniques of conventional risk and opportunity management can be applied.

Unknowns unknowns : unrecognised uncertainties of which the PM is unaware. These are totally unexpected, they are surprising outcomes, and by definition they are not known. They are further classified in two categories:

* **Unknwonable unk-unks:** these unk-unks or unexpected surprises cannot be anticipated by the PM. No amount of action by the PM will be able to convert unknowable unk-unks to something that can be known > tsunami;
* **Knowable unk-unks:** these unk inks could be foreseen by the PM but for some reason are not yet. They are not known for example due to cognition bias.

This paper aims to distinguish knowable unk-unks from unk unks un general, conceptualize a framework of the driving factors, and thereby provide specific guidance in the areas for recognising and reducing knowable unks-unks.

The framework has two main implications for every project manager that wants to deal with them:

* If a PM knows that unk unks are more Riley in a. Project, then the PM may choose appropriate strategies and investments for uncovering them;
* Some unk.unks may be analogous to Taleb black swans, which are events both highlight unexpected with disastrous consequences.

**CONCEPTUAL FRAMEWORK:** The project is seen as “a combination of interacting elements organised to achieve one ore more stated purposes”. It consists of at least five important subsystems:

* Product;
* Processes;
* Organisation;
* Tools;
* Goals.

**There are two main driving forces of unk-unks:**

* Project system design issues: complexity, complicatedness;
* Behavioural issues: mindlessness, organisational pathologies.

**Complexity :** the complexity of a system makes it difficult and occasionally impossible to recognise and fully understand all of its variables and all the relationships among them. Complexity is a driving factor made of two main constituents:

* **Element complexity:** determined by the number, variety, internal complexity, and lack of robustness of project elements. It is determined by the number, variety’s and internal complexity of each subsystem. It is also caused by a lack of robustness ( the more robust a subsystem is, the more able it is able to absorb a broad range of situations, and therefore be less likely to face unk-unks).
* **Proposition 1:** increased amounts of element complexity determined by the number, variety, internal complexity, and lack of robustness of a project’s elements will increase the likelihood of facing unk-unks;
* **Relationship complexity**: the number of relationships that exist among the elements of a system influence its complexity. Systems with more relationships among their elements have an increased chance of propagating casual effects. The variety of these relationships is relevant as well. Relationship criticality, where some relationships matter more than others, also plays a key role. Internal complexity among subsystems matter as well: one complex dyad can generate more complex behaviors for a system than several simple relationships. Of course, even external relationships contribute to the level of complexity: the greater the number, variety, criticality and internal complexity of such relationships, the greater the complexity.
* **Proposition 2:** increased amounts of relationship complexity determined by the number, variety, criticality, patterns, internal complexity, and externality of the relationships among a project’s elements ( products, processes, organisation, tools, goals) will increase the likelihood of encountering unk-unks.

**Complicatedness:** Complicatedness is the more subjective and observer dependent aspect of complexity. It refers to cognitive complexity. For a project manager, the project’s complicatedness depends on his or her ability to understand and manage the project. It is influenced by factors such as the intuitiveness of the project’s structure, organisation, and behaviour, the ease with which sought elements can be found and cause and effect relationship identified. Shorter said, here we are interested in the perceptions of the PM: these perceptions can be examined following the five subsystems of the project. There are several factors driving complicatedness: lack of encapsulated interactions, lack of observers capability, unintuitive system organisation, lack of observer capability, unintuitive system organisation, lack of observer experience, very large scale up, and divergent viewpoints.

Also, the complexity of a system itself drives the level of complicatedness: overall, very large scale-up increases complicatedness and the likelihood of unk-unks.

* **Proposition 3**: increased amount of complicatedness - as determined by a lack of encapsulated interactions, a lack of observer capability, unintuitive system organisation, a lack of observer experience, very large scale up, and divergent viewpoints regarding a project’s elements -will increase the likelihood of encountering unk unks.

By the way, it is important to remark that at least one of these sub factors might also have an opposite effect: greater encapsulated interactions might not always imply a reduced likelihood of unk unks. The recognition of a greater amount of complexity than presupposed might draw helpful attention that uncovers unk unks, making them less likely. By the way, a misguided perception of simplicity will increase the likelihood of unk-unks.

* **Preposition4**: increased amounts of encapsulated interaction of a PM with project’s elements may increase the likelihood of encountering unk-unks.

**Dynamism**: which means propensity to change - increases complexity and complicatedness . Internally, if a project’s elements are changing, then this introduces, eliminates, or varies elements and relationships, potentially spewing new patterns of relationships and emergent behaviours.

* **Preposition 5:** increased amounts of dynamism in a project’s elements and their relationship will increase the project’s complexity and complicatedness, and thus its likelihood of encountering unk-unks.

**Equivocality:** In most nowadays’ projects, especially large ones, work is broken down in smaller units and assigned to various agents, who must then coordinate to achieve mutually satisfactory solutions. This process requires the sharing of a lot of information, and if this is not specced and crisp then the receiver will not be able to make firm decisions and achieve results with confidence. Moreover, equivocality also increased the variety of relationships, thereby increasing complexity, and the number of divergent viewpoints, therefore complicatedness.

* **Preposition6:** increased amounts of equivocality in a project’s elements- processes, tools, goals, and their relationships - will increase the project’s complexity and complicatedness, and thus the likelihood of encountering unk-unks.

**Mindlessness:** Mindlessness is the antithesis of “mindfulness” a concept originating in the context of the contest of the cognitive behaviour of individuals. Mindfulness entails an enriched awareness that comes through processes such as (a) active differentiation and refinement of existing categorisations of knowledge, (b) creation of new categories out of a continuous stream of events, (c) more nuanced appreciation of context and alternative ways to deal with it, and (d) reactance to simply interpretations. Mindlessness represents the perceptive barriers to cognition.

There are four key sub-factors of mindlessness:

* **Entrapped mindset**: over-reliance on paste experiences
* **Pathological intensity:** single-minded effort to maximise output though the narrowing of expertise. It is characterised by a never-ending quest for efficacy, speed, and productivity. This “selective looking” may lead to “inattention blindness”
* **Missing weak signals:** it occurs when individual biases and inappropriate filters keep periphery-dwelling knowledge in the shadows.
* **Wilful ignorance:** state and arctic of ignoring input that is inconvenient or unappealing, in some cases because it appears to contradict the prevailing models of reality. It differs from the standard definition of ignorance (being unaware of something) in that will-full ignorant individuals might be fully aware of facts and sources, or at least suspicious of them, but refuse to recognise them or their implications.
* **Preposition7:** increased amounts of mindlessness in a project, especially in its PM, will increase the likelihood of encountering unk unks.

**Project pathologies**

Like a complex organism, a project can offer from a variety of persistent, subtle, or latent abnormalities that increase its likelihood of encountering unk-unks.

Using the metaphor of an organisation as a living organism, project pathologies refer to psychological or structural/behavioural sects of the project as a whole ( whereas mindlessness is tied to the single person, not the whole organisation). There are four consistent of project pathologies:

* **Mismatched project subsystems**:
* **Fragmented expertise**: complex projects require a multitude of technologies and management skills that fathom different levels of activities and span the range of tasks at each level. However, this may cause overspecialisation and fragmentation of knowledge and reduce the availability of general expertise.
* **Stakeholders’ unclear expectations:** a project’s stakeholder is any individual or group of people interested in the project. A project that does not adequately capture the desires of its stakeholders is more likely to discover later than sooner that those desires do not match the PM’s own expectations in terms of clarity, correctness, and /or comprehensiveness.
* **Dysfunctional culture:**
* **Preposition:** an increase in project pathologies will increase the probability of encountering unk-unks

**Implications for practise: Reducing UNK-UNKS**

The previously described framework proposes factors and relationships that increase the likelihood of unk unks in projects. By characterising a project in terms of these factors, a PM can identify specific aspects of a project’s product, processes, organisation, tools, and goes which unk unks might be lurking. The aim is to convert the unknown into the known.

**Project Design Approach:**

Project design-related approaches to uncovering knowable unk-unks include:

1. **Decomposing the project:** breaking the project down into elements and their relationships. Especially useful in order to deal with complexity.
2. **Analysing scenarios:** designing possible outcomes in the future. Doing so is especially useful in order to uncover unk-unks in projects with significant amounts of complexity, complicatedness, dynamic, equivocality, and mindlessness.
3. **Using checklists and predefined categories:** it involves codifying earning from past problems to enlighten future planning.
4. **Scrutinising project plans and admitting independent oversight:** project plans represent a hypothesis for successful transformation from the current state to a desired future state. These plans should be scrutinised at various levels and to various degrees by the project’s stakeholders. This scrutiny could come in the form of reviews, audits, and even formal verification and validation.
5. **Using long interviews:** they involve (a) digging deeper and wider and asking “out-of-the-box” questions of all the project participants and stakeholders at all stages (b) not letting enthusiasm for the project show through, not focusing on the projects team’s ideas, and not asking simple “box in” or “ yes or no” questions.
6. **Picking up weak signals.**

**Behavioural approaches**

Behavioural approaches to uncovering knowable unk unks include:

* **Effective and frequent communication:** valuable tool for anticipating and assessing equivocalities.
* **Balancing central controls and local autonomies:** they may be especially useful to face unk-unks driven by the relationship complexity and dynamism.
* **Incentives:** these incentives should be designed to motivate productive and desirable behaviours ( behaviours that are likely to reduce unk-unks).

Cultivate a culture of alertness to unk-unks as an antidote to mindlessness and a dysfunctional culture. Doing so includes developing systems thinking (thinking about limits about what is known about a project), building experiential expertise, becoming a HRO (embracing preoccupation with failure, reluctance to simplify, sensitivity to operations, and learning from surprising outcomes ( learn from failure).

To conclude, awareness of an increased potential for unk-unks enables a PM to allocate resources more appropriately and create an organisation that will not fall apart as easily when unk unk occurs - and that might even benefit from them.

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## 13. Joslin, R., Müller, R., 2016. The relationship between project governance and project success.

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## 14. Laine, T., Korhonen, T., Suomala, P., 2020. The dynamics of repairing multi-project control practice: A project governance viewpoint.

## 

## 15. Why good projects fail anyway - Matta & Ashkenas, 2003.

Many big projects fail, not only costing resources, but also demoralizing employees.

3 types of risks, of which the second and third are often overlooked:

* **Execution risk**: the risk that designated activities won’t be carried out properly
  + Project plans, timelines and budget are used to reduce this risk
* **White space risk**: the risk that required activities won’t be recognized in advance, leaving gaps in the project plan
* **Integration risk:** the risk that the disparate activities won’t come together at the end.

Solution to overcome the risk of overlooking critical activities when planning a project and increase integration chances: Rapid-results initiatives.

Rapid-results initiatives are a series of mini projects within a larger project. Each of these mini projects had it’s own team responsible for a version of the hoped for overall result in miniature and designed to deliver quick results. (example page 2, left side)

Rapid-results initiatives vs. traditional project management; 3 main differences:

* **Results oriented** (instead of partial)
  + Focus on measurable results (instead of recommendations, analyses or partial solutions)
  + 3 reasons: 1. to test hypotheses and adjust plans if needed, 2. Short term benefits, 3. Incentivize teams to perform, as real results are rewarding and energizing.
* **Vertical** (instead of horizontal)
  + Activities in chunks (instead of sequential), cross-functional effort (instead of monofunctional efforts)
* **Fast** (instead of long-term)
  + Generally no longer than 100 days
  + Personal challenge -> team members feel a sense of urgency from the start

Other differences:

* Delegation (manager “technical” bias)
* Balance

Horizontal activities have benefits as well (economies of scale). Leadership teams should balance rapid-results initiatives with longer-term horizontal projects.

Type of activities suitable for rapid-results initiatives:

* Activities that require close coordination among aspects
* Activities that can replicate longer-term goals on a small scale and provide the maximum opportunity for learning and discovery

Even if it does not fully realize its goal, the rapid-results initiative will produce valuable lessons and help further illuminate the path to the larger objective. And it will suggest other, and perhaps better-focused, targets for rapid results.

## 

## 16. Moving forward from project failure: Negative motions, affective commitment, and learning from the experience.

Project failures are common. We theorized and found that although time heals wounds (reduces the negative emotions from project failure) it heals differently depending on the strength of individuals’ specific coping orientations. Further, wounds are shallower for those who perceive that the organization normalizes failure. We conjointly consider learning from failure and affective commitment to an organization as determining how individuals move forward from project failure. Findings suggest that studies framing moving forward solely as learning from failure will likely overstate the benefits of loss orientation and understate the benefits of both a restoration and an oscillation orientation.

Failure is believed to be an important experience from which learning can take place. Project failure is a common occurrence, and researchers have suggested that organization members can learn more from their failure than from their successes. However, the opportunity to learn from a failure experience may not translate into actionable knowledge for an organization because the information revealed by the failure may not be effectively processes and/or the failure may generate negative emotions that diminish the individual’ commitment to acting for the organization’s benefit.

Obstacles to learning from failure at an individual level include a history of success, a low learning-goal orientation and cognitive biases. Obstacles at the organizational level include a non-supportive work environment, reward system that punish failure, and an organizational culture that stigmatizes failure.

Hypotheses:

Reflections over time can provide insights that lead to changed beliefs. Such insights may contribute to improved performance in several years, by suggesting better strategies etc. Hence:

H1: Organization members for whom the time since their project failed is greater and learn more from failure experience than organization members for whom that time is shorter.

Empirical research has shown that experiencing negative emotions mediates the relationship between negative feedback received and regulation of individual goals. It appears that the negative emotion generated by feedback generally diminishes employees’ affective commitment to their organizations. However, as time passes emotional ties to a failed project break gradually, so that thoughts about it generate less negative emotional reactions. Thus:

H2a: Organization members with more negative emotions over a project’s failure have less affective commitment to their organization than those with less negative emotions over a project’s failure.

H2b: Organization members for whom more time has passes since a project’s failure have fewer negative emotions related to that experience than those for whom the time since project failure is less.

A loss orientation refers to working through and processing aspects of a loss to break the emotional bonds to the object lost. Organization members who identify project routines that contributed to failure and need to be changed for future projects may acknowledge a general need for flexibility and change. This can lead them to develop capabilities to change processes, strategies, procedures or actions when necessary during projects. Thus,

H3: Organization members with a stronger loss orientation learn more from a project failure than those with a weaker loss orientation.

It appears that despite the potential to affectively lower negative emotions early, a loss orientation can eventually begin to generate negative emotions that exacerbate the emotional aspects of failure. Thus,

H4: Organization members with a strong loss orientation have fewer negative emotions in response to project failure than those with a weaker loss orientation when the period after a failure is short but have more negative emotion about the project failure when the period after the failure is long.

A restoration orientation refers to suppression of feelings of loss and proactiveness toward secondary sources of stress that arise from a loss.

H5: Organization members with a strong restoration orientation have fewer negative emotions in response to project failure than those with a weaker restoration orientation when the period after the failure is short but have more negative emotions about the project failure when the period after the failure is long.

An oscillation orientation refers to moving backward and forward between a loss orientation and a restoration orientation, thereby allowing individuals to obtain the benefits of each while minimizing their downsides.

H6: Organization members with a stronger oscillation orientation learn more from project failure than those with a weaker oscillation orientation.

H7: Organization members’ negative emotions stemming from a project failure decrease more with the length of time after the failure for those with a stronger oscillation orientation than for those with a weaker oscillation orientation.

H8: Organization members who perceive failure as highly normalized in their organizational environment will have lower negative emotions over project failure than those who perceive failure as le normalized in their organizational environment.

H9: Organization members who perceive failure as highly normalized in their organizational environment learn more from project failure than those who perceive failure as less normalized in their organizational environment:

Methods: 585 randomly chosen research scientists from 12 different research institutes in Germany. Linear regression to test hypotheses.

Results:

è H1: Significant, positive relationship between time since project failure and learning from failure, thereby supporting H1.

è H2a: Negative emotions resulting from project failure are negatively and significantly related to affective commitment to organization, supporting H2a.

è H2b: The results indicate a non-significant relationship between the time since project failure and the level of negative emotions. Therefore, H2b is not supported.

è H3: Results indicate a significant, positive relationship between a loss orientation and learning from project failure, supporting hypotheses 3.

è H4: When the time since project failure is longer, individual with a strong loss orientation experience greater levels of negative emotions associated with the failure: however, individuals with a weak loss orientation experience comparatively lower levels of negative emotions associated with it. This support hypothesis 4.

è H5: The interactive term was non-significant, hence hypothesis 5 is not supported.

è H6: significant, positive relationship between an oscillation orientation and learning from project failure supports h6.

è H7: The interaction shown in Figure 3 indicates that organization members’ negative emotion from project failure decrease more with the length of time after failure for those with a strong oscillation orientation than for those with a weak one. This supports H7.

è H8: The results reveal a significant, negative relationship between the perception of normalization and the level of negative emotions, supporting H8.

è H9: The relationship between perceived normalization and learning from failure was shown to be non significant. Thus, h9 is not supported.

è Extra: Although not hypothesized, a significant positive relationship was found between emotional intelligence and the amount of learning from project failure.

Critical findings:

In this study we theorized and found that negative emotions decrease with the time since project failure (H1), but also that negative emotions reduced more quickly for those with a stronger oscillation orientation (H7). The level of negative emotions over project failure was lower for those who perceived their organization as normalizing failure (H8) and it was lower for those with a stronger loss orientation when the period after failure was short but higher for such individuals when the period was long (H4). Jointly considering learning from failure and affective commitment to organization to determine individuals’ progress in moving forward from project failure, we found that such learning increased with the time since a project failed (H1) and for those with a stronger loss orientation (H3) and a stronger oscillation orientation(H6). Our result indicates lower affective commitment to their organization for those who experience more negative emotions from failure (H2a).

Conclusions: Project failure is a way of life in many organizations. Organization members’ ability to learn from those failures and their willingness to continue to support their organization are important for the latter to move forward. We theorized and found that learning from failure is not instantaneous (takes time) and not automatic (organization members differ in the strengths of their coping orientations, and these differences matter). We also theorized and found that although time heals wounds, it helps differently depending on coping orientations, and the wounds are shallower for those who perceive their organizations as normalizing failure.