Prototyping for organisational agility:
Using the fundamentals of design to manage changing circumstances

Max DAVIDSE[*a], Christine DE LILLE[a,b] , Sander STOMPH [a], Barend KLITSIE [a]

[a] Delft University of Technology; [b] The Hague University of Applied Sciences

In our current and turbulent times, it is clear that some sort of organisational agility, in which-ever way achieved, is necessary to survive and thrive as an organisation. The question is how to achieve such manoeuvrability. We propose the use of design (thinking), with a focus on prototyping to iteratively develop greater organisational agility. Based on literature research into the circumstance that drive change, design, prototyping and a number of organisations that seem to have incorporated the right tactics, as well as observations made at a change-programme for a large Dutch corporate, we have developed a model to guide this process. The model proposes that an organisation should focus on developing a shared sense of purpose, to guide all its undertakings. Afterwards, employees should collaborate on iteratively creating the right (digital & physical) environments, culture and personal grounding for them and the organisation, to be able to achieve this purpose. Based on certain (dynamic) criteria and these various domains, personal responsibilities (action agendas) may constantly evolve and keep the organisation agile. This paper explains the reasoning behind the model and calls for further experimentation to take place to verify its effectiveness.

Keywords: *Organisation, Agility, Fundamentals, Framework, Prototypes*

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[*] **Max Davidse** | **m.c.davidse@tudelft.nl**

Introduction

Changing circumstances have forced many organisations to pursue organisational agility. Adapted from Ahlbäck et al., 2017, our definition for organisational agility is: 'the ability to quickly and adequately reconfigure strategy, structure, processes, people, and technology toward value-creating and value-protecting opportunities in order to maintain or increase performance, while fulfilling the company purpose and/or customer promise.' In order to work out variations on agility, we explore the use of prototyping, as a key factor of iteration in design research, to achieve increased agility within an organisation over time.

Changing circumstances

With the advent of the digital age (i.e. the widespread use of broadband internet, smartphones, tablets, social media etc.), companies have started to be subjected to increasing competitive pressure (Ahlbäck et al., 2017). The competitive landscape in which they operate changes at an ever greater speed. Many companies still struggle with their current approach to digitisation (Bughin et al., 2018), with the next wave of large digital change influences (Big Data and AI) already underway. These developments have come at an almost incomprehensible pace for current businesses. They struggle implementing them in their current product and service offerings, as well as their workplace. At the same time, incumbents adept at these technologies sprout out of nowhere, leaving existing organisations vulnerably behind (Gruber et al., 2015).

Meanwhile (and possibly partly as a result of these technological changes), demands on the organisation have greatly increased as well (Ahlbäck et al., 2017); products and services developed by organisation to satisfy user needs are subject to higher and higher expectations and consumers are demanding near non-stop lines of coherent and personal communication (i.e. relationships) with companies (Kotler & Armstrong, 1980) as a result of ever greater social media presence . Through servitisation of many value-propositions, companies have created an environment where a constant (critical) dialogue with consumers is possible and necessary. These and other developments force companies to change.

As Gardien & Deckers (2015) wrote: "Following the paradigm shift from the industrial and experience economy to the knowledge economy, we live in a world of constant and rapid change; one in which users expect evolving, personal experiences." The old business paradigms of efficiency through bureaucracy, work flow optimisation and task specialisation, Weberism, Taylorism & Fordism, have become outdated in light of this increased demand for flexibility of the organisation, and a stronger emphasis on the needs of employees. Optimising one's company in such ways simply isn't going cut it anymore.

These approaches of scientific and bureaucratic management lead to the omnipresent organisational silos, which hinder agility (Ahlbäck et al., 2017) through lack of collaboration and communication (Pullin, 1989) and are often aimed at achieving local goals, with a focus on risk-aversion (Bughin et al., 2018). This realisation comes at a time characterised by an ongoing competition for talent (Gruber et al., 2015), where employee expectations have greatly increased. The new labour force, generation Y, has different expectations from those before them. They want to be able to pursue personal growth in a job that also provides them with a meaning, while also having some form of flexibility (Gruber et al., 2015). Vielmetter & Sell (2014) write that a culture of openness, knowledge sharing, and more employee autonomy is becoming more important with rising individualism (which was enhanced by the rise of the internet and social media). The aforementioned technologies blur the boundaries between work, rest and play, and have the power to transform the workplace experience; employees are also consumers and have grown accustomed to smooth digital experiences outside of their work, which they now seek in their workplace environment as well (Gruber et al., 2015). Morgan (2017) argues that investments in the employee experience, where organisations create a workplace where people want to – not just need to – work, lead to 'larger talent pipelines'. His research also shows that results include happier employees and greater profitability & productivity – with companies investing in employee experience outperforming those that don't by large margins.

Finally, changes in regulations may occur at any moment in time and force organisations to adjust any number of aspects crucial to their existence (Ahlbäck et al., 2017). A solid example of such a change is the 2016/2018 General Data Protection Regulation – a consolidation of all EU data protection laws that has resulted in large-scale compliance programmes that, for example, should include cross-functional task forces (Mikkelsen, 2017).

These circumstances are summarised in Table 1.

Table 1:   Summary of changing circumstances.

Competition	From the competitive playing field, i.e. others with a similar value proposition.
	For the acquisition of talent.
Demand	From customers – partly driven by increased customer control, as well as greater servitisation of many value propositions, which enable a more constant dialogue.
	From employees – partly driven from their experiences as customers of other companies, as well as their generation's expectations (such as meaning and self-development).
Technology	New possibilities for value propositions.
	Digitisation (& thus servitisation) of value propositions, especially threats from incumbents.
Regulations	Changes might come up at any time and force organisation to adjust any number of aspects crucial to their existence.

This paper presents a conceptual model for creating organisational agility, based on the principles of design and prototyping in particular. Said model was created through extensive literature review, as well as observations made during a set of medium-scale change events at a large Dutch corporate organisation.

Applying design (thinking)

The circumstances outlined above force organisations to pursue organisational agility, but the question remains: 'how?' Design has increasingly been used to solve more abstract and complex problems and even the design of complex (sociotechnical) systems. In doing so, design has gone beyond its initial workings and philosophy. From roots in craft-like product creation, through the industrialised mass-manufacturing of products, design has evolved. The past decades, design has come to encompass the fields of interfaces, interactions and experiences, and after that even services and whole systems (Norman & Stappers, 2015). Design has come to a point where it is a combined state of mind and a more or less fixed set of tools, steps and processes to solve wicked and ill-defined problems – which creating organisational agility qualifies to be. It is an iterative problem-solving process, where desirability, feasibility and viability are constantly balanced. We argue that design can be well-suited for helping in the creation of organisational agility.

'The main goal of design as a discipline is to promote wellbeing in people's lives.' (Mauricio et al., 2012). To do so, designers find situations that are in some way disruptive to this wellbeing, identify the underlying problem (the cause of the disruption) and generate solutions for that problem. Clearly, the case of creating organisational agility reflects this goal, as working for an organisation that is inapt at dealing with current and future realities can be disruptive to wellbeing in various ways. For many, the focus in of design is the human; and design is often called human-centred (Brown, 2016). More recently, however, the balance between human, technology and business has been emphasised, as per Tim Brown's quote at the beginning of this chapter, and as explained by Calabretta, Gemser & Karpen in their book 'Strategic Design' (2016). They speak of balancing desirability, feasibility and viability.

Design thinking can be viewed as a mind set (Riverdale + IDEO, 2011), or a set of principles – such as empathy with users, a discipline of prototyping and a tolerance of failure (Kolko, 2015). As described above, the application of these principles is often non-linear and iterative. Both this balance and non-linear application will be reflected in our model to organisational renewal as presented below.

A focus on prototypes

In creating organisational agility, the above-mentioned empathy, tolerance for failure and iteration can play an important role. These principles come together in prototyping. As per Coughlan et al. (2007), there are three reasons why prototyping can help facilitate behavioural change in the organisation: building to think, learning faster by learning early (and often) and giving permission to explore new behaviours. Thus, for creating organisational agility, we propose a heavy emphasis on prototyping, to quickly help eliminate uncertainty and ambiguity, amongst other reasons. Prototypes are essential when using an iterative process, in that they are easily made and instantly tangible. In iterative processes, failure is inevitable (and a positive trait, as it generates new learnings) and prototypes enable resource-limited, or cheap failures.

For the purpose of clarity, a solid definition for a prototype must be found. Based on research into the different views on and definitions of a prototype (Buchenau, 2000; Brandt, 2007; Lim et al., 2008; Cao, 2015; Verba, 2008; Kelley & Kelley, 2013; Jensen, Elverum & Steinert, 2017) this definition will be: "A prototype is an incomplete version of (part of) a product, service, process or system, produced during its development." In the context of this paper, of course, the focus lies with prototyping processes and systems, as organisations can be viewed as a mix of these.

Benefits to prototyping

There are many benefits to, and thus reasons for prototyping. These may apply to various kinds of situations, so not just in the case of creating organisational agility. They just as well apply to, for example, prototyping in an app development process.

Prototyping helps with communicating & collaborating, as it provides internal and external stakeholders of a project with a shared and focused goal to work towards (Cao, 2015; Verba, 2008) by means of a focused discussion (Stappers & Flach, 2014). In making the abstract more tangible (Stappers & Flach, 2014) and explicit (Coughlan et al., 2007), it eliminates or drastically decreases the chance of misinterpretation (Cao, 2015) within or outside of the team or organisation. This way, prototypes often act like boundary objects (Menold et al., 2017 ; de la Rosa et al., 2017). Prototypes get the right people in the room communicating in the right ways and because of this, they enable direct input from multiple stakeholders (Cao, 2015; Verba, 2008; Kelley & Kelley, 2013; Coughlan et al., 2007).

Coughlan et al. (2007) also argue that, as a manager, engaging in the process of prototyping (or even merely letting your employees engage in it) shows a willingness to explore new behaviours. This is clearly important when trying to alter the status quo. By letting people confront the unknown and fail, some sort of permission is given to deviate. On top of this, having a physical artefact present (in whichever way this might be) also triggers a more active and conscious form of reflexiveness on the process and the status quo. In a way, the prototype acts as what is called a rational override (van Lieren, 2017).

The process of creating prototypes helps in confronting the unknown – they are knowledge generators; both of the phenomenon itself, and the world around it (Stappers & Flach, 2014; Sleeswijk Visser, 2014). As such, the (design of the) prototype creates a setting that lets all stakeholders experience the new future of the solution under construction (Cao, 2015), since the prototype already changed the world by being in existence (Stappers & Flach, 2014).

There is a constant stream of actions and decisions to be made – hypotheses to be tested (Stappers & Flach, 2014). After every action or decision, new questions will pop up that must be answered. In choosing which to answer, prototyping also forces teams to set priorities in the process (Cao, 2015), such as deciding which decisions to make, which direction to go etc... At the same time, the opposite holds true; prototypes do allow for keeping multiple concepts alive simultaneously (Kelley & Kelley, 2013; Dow et al., 2010), to postpone judgement. In any case, prototypes can act as a form of living checklists (Luijkx, 2017), in the sense that they make tangible those decisions that have been made and act as a hook for those that haven't yet. What has been done is as clear as what hasn't been done.

Prototyping helps teams to learn fast, by failing in action (Cao, 2015; Kelley & Kelley, 2013; Coughlan et al., 2007). In doing so, the feasibility and usability (and perhaps even viability) of the concept under development can be continuously evaluated and improved upon. Though failure doesn't necessarily seem a positive concept it is a human trait that we can't really escape. The benefit of failing early is that most failures will probably be low-impact failures (Cao, 2015; Kelley & Kelley, 2013; Coughlan et al., 2007) with little ramifications for the overall business. As Coughlan et al. (2007) put it: "[...] if we acknowledge that (a) failure produces powerful learning for an organisation and (b) seldom is the first solution to a problem the best one, then it stands that one can help an organisation reduce risk by lowering the cost of learning." Through this continual improvement and the concrete aspect of it, prototypes can help with implementing (organisational change) immediately and iteratively. Under the right circumstances, this helps minimise the chance for various kinds of problems to overwhelm implementation (Norman & Stappers, 2016) by breaking it up.

This quick and dirty approach to concept development helps avoid the attachment (or investment) trap (Coughlan et al., 2007) – where it is difficult to move on from a certain idea or concept, since you've fallen in love

with it or feel too much resources have already been put into it to simply let it go. By ditching a failure early-on, there is no time to come attached or to over-invest. Prototypes are (more) easy to let go of (Kelley & Kelley, 2013).

Unsurprisingly, prototypes help with selling your idea (Cao, 2015; Verba, 2008; Kelley & Kelley. 2013). The concrete is more easily to grasp than the abstract, so it's also easier to sell. Product presentations, such as the famous iPhone launch by Steve Jobs in 2007, often make use of prototypes. At design consultancy IDEO, they even developed and adhere to Boyle's Law (named after IDEO partner Dennis Boyle: never attend a meeting without a prototype (Kelley & Kelley, 2007).

Pitfalls of prototyping

Of course, there are downsides to the prototyping process as well, mostly in the form of pitfalls that should (and can often) be avoided. Prototypes are often put together quickly. As a result, it's not always possible for prototypes to scale up or be reused in later stages. So even if a prototype is working, sometimes new prototypes have to be rebuilt for further testing. Taking up precious time and resources (Callahan, 2017).

Although there are many benefits, prototyping is quite resource-intensive. On top of this, every new variable that is tested will add up to the overall development time. This might seem negligible at first, since prototypes are fast to create, but if several new needs are discovered throughout the prototyping process, these minor delays can add up to a significant one (Callahan, 2017). Therefore, it is recommended to set certain boundaries to the process if timings need to be met.

Fidelity (Buchenau, 2000) is another issue (Verba, 2008). If fidelity of the prototype is either too high or too low, this might pose problems. Not only does creating a prototype with too high of a fidelity result in wasted time, it might also focus attention on wrong details. In the case of prototyping a physical environment for example, adding colour or texture to floor plan might have people discussing the shade of it, even though the mock-up was meant to investigate the lay-out of desks. It might also make people interpret a prototype as a done deal, limiting their willingness to give input. If fidelity is too low, prototypes might not be taken seriously, or their value might be perceived as low. To tackle this issue and that of resource-intensiveness, it is advisable to choose the easiest to fabricate (i.e. lowest-fidelity) prototype that remains effective. This ensure the prototype can be built quickly and inexpensively but still provide the information that the designer is looking for (Ulrich & Eppinger, 2011). A possible solution is to increase fidelity (and thus functionality) of the prototype over time, as the project progresses (Yang, 2005).

Next to this, it's a common problem to over-engineer the prototyping process (Verba, 2008) and, in doing so, to deviate from the problem at hand. Focus shifts from solving the right problem to the process of prototyping and thus the wrong problem might be solved.

Finally, it is difficult to annotate prototypes (Verba, 2008). In other words, the prototype at hand shows only the final result of the work done up until that point, and not the decisions that brought it there. A certain parameter of the prototype (like the amount of desk space available in the new environment) might be the result of chance, or the result of extensive testing and elaborate discussion. For outsiders, this is impossible to know, especially without accompanying information. Thus, this shortcoming is especially important to consider when handing over prototypes or prototyping results to others, both internal or external to your team or organisation.

This research is summarised in Table 2.

Forms of prototypes

As becomes clear in the text above, prototypes can take infinite forms. From very concrete, to more abstract kinds of prototypes. A concept car, for example, is a well-known and concrete form of prototyping. Prototyping a service through role-playing might be more abstract. In the case of this approach, prototypes can take any number of forms. Actual teams of employees can start testing the new approach in a different room, or a different building. Mock-ups of any aspect of the new organisation can be made on a table, wall or floor plan. All aspects of the new reality can be prototyped, to see whether they will work or not.

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Table 2:   Summary of research into prototyping benefits and pitfalls.

Benefits	Enhances communication & collaboration through tangibility and shared goals, views etc.
	Shows willingness to explore new directions (i.e. behaviours, services etc.).
	Helps to confront the unknown (both of the phenomenon and the world around it).
	Forces decision-making & priority setting through its creation.
	Allows for multiplicity: keeping alive multiple options simultaneously.
	Helps learning through failures.
	Relatively low cost enables avoiding the attachment trap.
Potential pitfalls	Prototypes aren't always scalable or reusable as a result of their 'quick-and-dirty' nature.
	Prototyping can be quite resource-intensive, especially in testing large numbers of variables
	Fidelity can cause problems if chosen either too high or too low.
	Over-engineering the process can cause focus to shift away from the actual problem.
	Prototypes can't be annotated well; thus, past decision might be lost in translation.

Prototyping agility model

A model for prototyping organisational agility was created based on the insights into design and prototyping as mentioned above. The model consists of various elements, backed up by extensive literature research, as well as observations by the first author of a change effort at a Dutch corporate. Below, the structure and elements of the model are explained step by step. For most of the elements, recommendations are provided on how to maximise organisational agility when dealing with that element.

Raison d'être

First, create a manifest (Schein, 2004); a shared purpose and direction that guides the organisation as a whole, as well as the different teams within (Aghina, 2017). The purpose should describe a line on the horizon for both these levels. We speak of a line, not of a dot, since your present situation can never precisely predict where you'll end up in the future. Research into progressive and agile companies (Minnaar & de Morree, 2017) shows that a focus on purpose and values is more effective than a focus on profits. The organisation and its purpose should be driver-led, based on shared values. This way, changes in e.g. processes, technology, people won't fundamentally alter the core of the company. A purpose enables agility; most of the changes the organisation undergoes are to better reach the purpose. Also, it provides employees with a true meaning in their job and a shared sense of purpose they can work towards together. A good purpose should help people feel personally and emotionally invested (Aghina, 2017) in the project and their job.
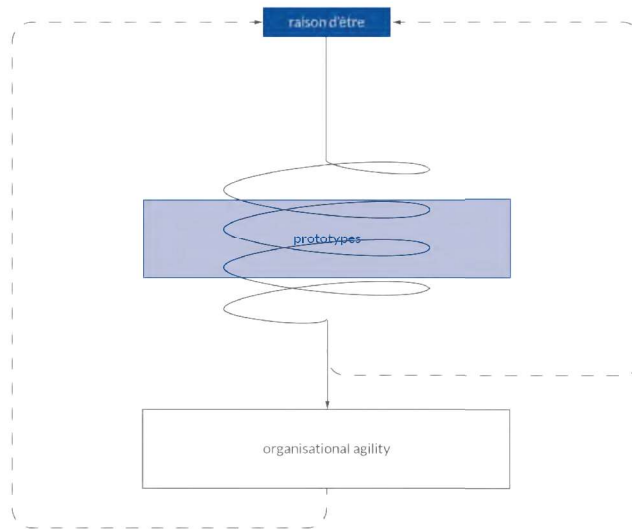
Figure 1   Model showing the iteration from purpose (raison d'être) to agility. Note the various feedback loops back to the purpose, after learnings have taken place.

Use this "North Star" (Aghina, 2017), to start working towards this new agile organization (see Figure 1). Approach the situation as a design problem; i.e. use iterations to work towards a constantly improving solution. Test assumptions and learn from them, either by confirming they fit, or by finding the aspects that make them fail and making sure they won't be used in later iterations.

When it comes to the elements that constitute an agile organisation, we propose to focus on five distinct subjects: environments, culture, grounding, action agendas and criteria. These elements are detailed below.

Environments

In order to motivate and facilitate your employees, create inspiring and open physical and digital environments (Aghina et al., 2017) for the organisation's staff to work in (Gruber et al., 2015). The environment should suit the company culture and (different) ways of working, as well as facilitate the newly developed groundings, or (in)formal positions and relationships of the employees towards each other. The digital environment should enable employees in their daily tasks. As a result of an open culture, these apps and services should provide them with real-time transparency and data (Minnaar & de Morree, 2017), in order to help with distributed decision making (Kniberg, 2014-1). In current times, these digital solutions should be designed to be on-par with customer-centred apps and services (Myerson & Ross, 2013 cited by Gruber et al., 2015), so their use facilitates, but does not distract from or complicate the task at hand.

Culture

Design an open culture, where constant communication and collaboration take place in various (in)formal ways. The culture, like the grounding of employees, should constantly change. Experimentation and adaptation (i.e. iteration) should be key (Aghina et al., 2017), at Spotify, for example, they talk of a fail-friendly environment, where failure is key to learning. Their solution is to minimise the risk of failures ('creating limited blast radius'). This mind set should apply both towards the outside of the company (the products and services delivered by the organisation, as well as their competitors) and the inside (the culture, purpose, grounding etc.). Continuous learning should be a part of the organisation (Aghina et al., 2017) By engaging in radical transparency (Aghina et al., 2017), i.e. enabling easy access of as much information as possible to as many people possible, distributed decision making should be attainable (Kniberg, 2014-1). This provides freedom & trust (empowerment (Mahadevan et al., 2017) for employees, which are highly autonomous human beings (Minnaar & de Morree, 2017), and in turn should enable autonomy for all employees (whenever possible). Constant communication, together with an organisation driven by its drivers and purpose enables employees and teams to engage in aligned autonomy, as per Kniberg, 2014-1. Freedom and autonomy should not cause chaos, as everyone is ultimately responsible for their own

performance. As a result, management should be supportive (Minnaar & de Morree, 2017) and hands-on (Aghina et al., 2017), and mainly work towards clearing impediments. This communication, as well as the shared purpose, the access to information and more, should lead to a cohesive community (Aghina et al., 2017) and thus help to eliminate the silos of old.

Grounding

Co-create a way for everyone to work together; define (in)formal positions and relationships for the employees towards each other. Remember that these might change as the company adapts, but that they provide some grounding to the employees while they stand. As Kniberg (2014-1) writes about Spotify, community is more important than structure. This is a good approach to ridding yourself from (organisational) silos. By using less formal structures, job descriptions and strict territories, anyone can find their (in)formal place (i.e. grounding) within the organisation. This enables constant change. This decrease in hierarchy and structure thus isn't merely a requirement for increasing agility of the organisation, it also acts as a catalyser for change. Of course, it's important that the organisation provides everyone with a formal place, but at the same time leaves room for everyone to find informal relationships and links as well. From the organisation's perspective, these groundings should look like constantly evolving networks of teams (or 'fit-for-purpose performance cells' (Aghina et al., 2017)), as opposed to set hierarchies (Minnaar & de Morree, 2017). Through the North Star, these teams can be loosely coupled, but tightly aligned (Kniberg, 2014-1). Given the opportunity, role mobility (Aghina et al., 2017) should then allow them to start working on dealing with these topics.

Action agenda

Instead of creating set-in-stone job descriptions, employees should work based on their talents and mastery of certain skills (Minnaar & de Morree, 2017). The constantly changing grounding (i.e. relationships & place), combined with a transparent and forward-looking culture should foster a dynamic action agenda for employees. This agenda should be based on talents and mastery of individuals' skills. This doesn't mean that employees can just do whatever they please. On the contrary, at any moment in time, all employee should be assigned clear and accountable roles (Aghina et al., 2017). However, employees across the organisation should proactively look for, for example, opportunities to create value, for changes in consumer preferences etc.

Criteria

The basic design cycle (Roozenburg & Eekels, 1995) states that, once there is some kind of goal to work towards, criteria must be set up to measure the design. In this model, those criteria are twofold: constantly try to have some conditions for the process of change itself, as well as the various topics for the new agile organisation. A 'definition of done' should be provided for the change, to give some sort of indication into when the new approach can be implemented. When it comes to the various elements of the new organisation, these all need to be pre-defined in some way or the other as well. The criteria help in aligning the various blocks with one another. As an example: the physical environment should enable role mobility, and the digital environment should enable easy access to information.

The elements detailed above all come together in Figure 2. For these various elements, it is possible to iterate through the 'regular' ways of prototyping and by applying the design process. For example, the physical environments can be tested with table-top mock-ups, through sketches renders, or full-sized demos.
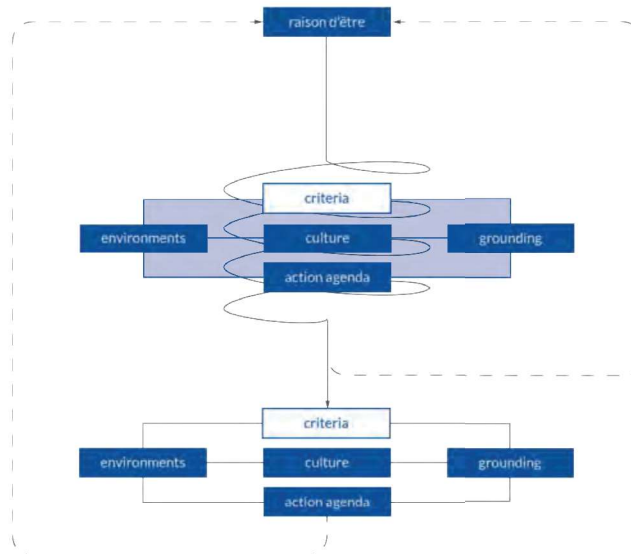
Figure 2   The agility model with the various elements filled in.

Hard return

From an organisational perspective, there comes a moment in time when the iterations (and prototyping) should stop, at least for a while. Endless prototyping, without actual implementation, won't achieve the desired results. From that point onwards, the decision must be made to 'just go with it' and employ those practices, environments etc. that have been developed over time. A hard return must be set, after which the new organisation, with all its facets is implemented quickly. From that point on, iteration can of course continue again. An example of such a hard return was the implementation of the new way of working at ING Netherlands (Mahadevan et al., 2017), where the entire way of working at the Dutch headquarters was changed following experimentation with just one team.

Burning platform

Finally, observations at a medium-sized change programme for a large Dutch corporate showed that it is important to create a sense of urgency for the process. This way, all layers of the organisation, but especially the employees in the involved teams, will have a tangible hook, a solid reason for the (potentially) large-scale changes that occur as a result of pursuing organisational agility. Decide on the one thing everyone agrees really needs to change to build a sense of urgency and momentum within the organisation (van Heerden, 2018). Of course, there are many more reasons (like the overarching reason of dealing with rapidly changing circumstance), but these are too abstract. Providing a tangible and concrete reason might help in convincing everyone to join the conversation and helps with the implementation of the changes in mind set and approach. In a way, this burning platform is an extra motivator, on top of the purpose. It's important, like with any step in the design process or when prototyping, to make the burning platform as tangible as possible, e.g. through storytelling or clear visuals.

By bringing all these elements together, we come to the Prototyping Agility Model, as depicted in Figure 3. Table 3, which is attached below that, highlights the various elements once more. It also provides examples of prototyping efforts, as well as the insights we have already gathered from the efforts so far. *Note that we are currently in the midst of our research and plan to increase our prototyping efforts 'in real life' at a large Dutch corporate over the coming months.*
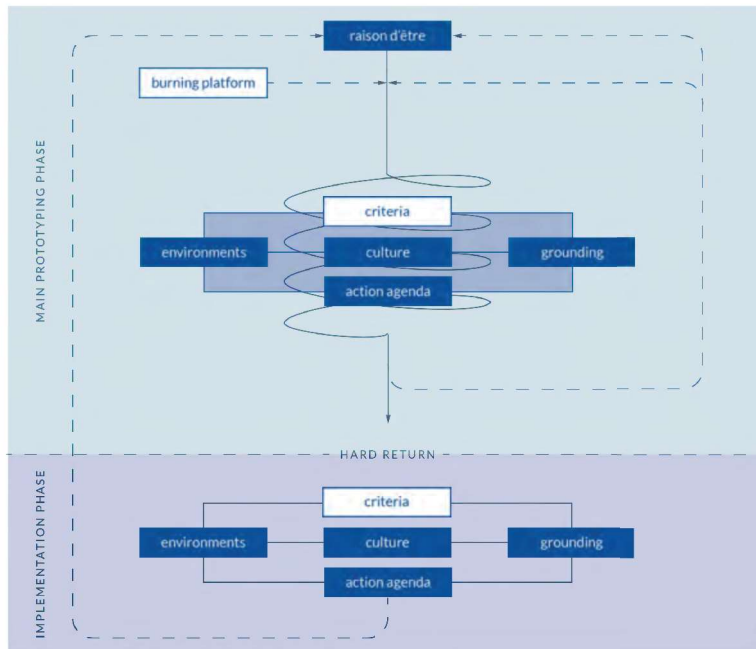
Figure 3   The Prototyping Agility Model.

Table 3:   Summary of the Model elements, prototyping examples and status of said examples. Note that empty fields generally mean the researchers are in the process of prototyping this element, or plan to do so in the future.

Element	Basis	Prototyping examples	Status	Insights
Raison d'être	Create a manifest (Schein, 2004); a shared purpose and direction that guides the organisation as a whole, as well as the different teams within (Aghina, 2017). A focus on purpose and values is more effective than a focus on profits (Minnaar & de Morree, 2017). A good purpose should help people feel personally and emotionally invested (Aghina, 2017) in the project and their job.	Visualise (i.e. draw) a 'line on the horizon' in a shared session. Use LEGO to 'build the future'. Use a cleared wall to gather ideas for a purpose over an extended period of time. Laddering: iterate a vision by sending it for feedback to groups of random employees. Staging the purpose as a presentation with focus groups of employees.	Tested

Tested

Tested | The purpose needs to be personal enough to inspire, yet broad enough for everyone to feel included.

The purpose should be driver-led.

The purpose should be future-oriented but close enough to the present that it doesn't feel unattainable. |
| Environments | In order to motivate and facilitate your employees, create inspiring and open physical and digital environments (Aghina et al., 2017) for the organisation's staff to work in (Gruber et al., 2015). The digital environment should enable employees in their daily tasks. | **Physical**
Use table-top mock-ups
Create sketches (live)
Order renders
Co-create full-sized demos

Digital
Create fake database links in Excel
Mock-up screens, e.g. with InVision |

Tested
Tested | |

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Discussion & conclusion

Culture	Design an open culture, where constant communication and collaboration take place in various (in)formal ways. The culture, like the grounding of employees, should constantly change. Experimentation and adaptation (i.e. iteration) should be key (Aghina et al., 2017).	Create an experimental setting where one or more teams are allowed to 'play out' different cultures and grounding with their day to day activities. Use LEGO puppets, or other dummies to act out certain daily or weekly scenarios in the context of the newly proposed culture & grounding. Write out the new commandments and ideals of a desired culture and subsequently draw out the resulting groundings for all team members.	*To be further tested in the coming months. Preliminary results expected in July 2018.* Tested	These elements need to be prototyped conjointly, as their underlying elements are similar and heavily influence one another.
Grounding	Co-create a way for everyone to work together; define (in)formal positions and relationships for the employees towards each other. Remember that these might change as the company adapts, but that they provide some grounding to the employees while they stand. As Kniberg (2014-1) writes about Spotify, community is more important than structure.			
Action agenda	Instead of creating set-in-stone job descriptions, employees should work based on their talents and mastery of certain skills (Minnaar & de Morree, 2017). The constantly changing grounding (i.e. relationships & place), combined with a transparent and forward-looking culture should foster a dynamic action agenda for employees.	Create a 'backlog' & personal action agenda for a team and its members, and let them work as independently as possible to receive feedback.		
Burning platform	Create a sense of urgency for the process. This way, all layers of the organisation, but especially the employees in the involved teams, will have a tangible hook, a solid reason for the (potentially) large-scale changes that occur as a result of pursuing organisational agility. Decide on the one thing everyone agrees really needs to change to build a sense of urgency and momentum within the organisation (van Heerden, 2018)	Visualise the current situation, such that anyone can see what's wrong and what needs to change.		
Criteria	The basic design cycle (Roozenburg & Eekels, 1995) states that, once there is some kind of goal to work towards, criteria must be set up to measure the design. In this model, those criteria are twofold: constantly try to have some conditions for the process of change itself, as well as the various topics for the new agile organisation.			

Our research set out to find a way to increase organisational agility, in light of the changing circumstance of today's world. We first outlined these changing circumstances and explained the subsequent reasons that force organisations to change. This paper consolidated multiple literature studies on the changing circumstances of today's society, based on the themes identified by Ahlbäck et al. (2017): as changes occur in demand, competition, technology and regulations. While failing to react to these changes in an adequate manner may harm the organisation's future prospects, reacting to them in the right way might enable new value-creating opportunities and even competitive advantage (towards those failing to react). The goal of creating or increasing organisational agility can be seen as a both a wicked and ill-defined problem, thus design (thinking) was proposed as a method to help solving it. Lessons from practice and design research teach us that solving such problems requires iterative processes and a hands-on approach. Prototyping proves to help in such circumstances, as our elaborate research into the benefits and potential pitfalls shows.

The framework for creating organisational agility starts off with a clear purpose, or raison d'être for your organisation and its employees. A sense of urgency is created in the form of a burning platform, in order to gather even wider support for the change. Iteratively, work now progresses on the various elements of the new organisation: its culture, physical and digital environments, employee grounding and, as a result, the various action agendas of all employees. All of these elements can be prototyped in whichever way possible, to increase tangibility, communication and hosts of other aspects. All outcomes are compared to pre-set and evolving criteria. Once enough iterations have passed for the organisation to feel ready to commit, a 'hard return' is enforced and the new organisation takes effect. From this moment on, though there is no going back for the organisation, iteration should not stop. New learnings should be implemented continuously, and new iterative prototypes can still be made.

This paper has added to the body of literature on organisational agility. Though many magazine and journal articles are available that emphasise the need for organisational agility, and those that highlight (some of) the best practices of those organisations that have (partially) achieved it, literature on how to actually achieve such agility is (nearly) non-extant. The proposed framework for creating such agility, though still relatively vague and in its infancy, thus adds value to both the academic and business worlds. Both as a base for further research and as a concrete way of working towards organisational agility.

True to expectations, the framework presented above bears some resemblance of more general iterative (design) cycles, like the general design cycle developed by Roozenburg & Eekels (1995). However, the process differs significantly from such a descriptive and academic approach as well. During the research, we gradually realised that, in order to make the approach more practical and increase its feasibility in corporate environments, certain 'concessions of reality' should be made. The addition of the burning platform, an extra step to increase organisational awareness and support is an example of such an alteration.

As explained, the framework described in this paper mainly stems from literature research (as well as some real-world observations in a corporate environment). Though various aspects of the framework have already been iterated upon (and are being developed further at the moment of writing), the approach in its entirety has yet to be tested and perfected through iterations with actual organisations. To do so, we aim to prototype the various elements of the approach at one or more organisations, to collect (additional) feedback and find gaps in our knowledge. After that, the approach as a whole should also be scrutinised through testing. We invite others to do the same as well and notify us of their findings.

Sadly, though the researchers believe prototyping to be of unique importance, due to lack of time as well as the unique challenges of each situation, no concrete prototyping practices or examples were included in this article. As a result, particular attention should be given to this topic in further research. Furthermore, the ideal setting for the first few iterations is to be investigated; should the team(s) work separately from the rest of the organisation while developing this new approach, or as closely to the actual organisation as possible? Other questions remain as well. Does this process, and the resulting agile organisation fit all teams, departments and organisations?

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