

Business Agility for Managers of the Digital Age

2022

Everything you read in this short book is the result of many years' collaboration and co-creation with managers, agilists, and colleagues. I recall discussions back in 2016 with my dear friends Manoj Ramchandani and Andrea Darabos, without whose on-going support and wisdom we would have nothing more than ideas on a napkin. Luca Willington, Lynsey Mahmood, Rod Willis, and Pam Ashby who helped me prepare a submission for the Harvard Business Review. Raymond Hoffman, Evan Leybourn, Ashleigh Ducker, and Mike Burrows who gave me actionable feedback as I struggled to communicate the concepts. Andy Farmer, whose unique perspective on readership has changed the way I write. Ilse and Bram, whose peer-reviewing of the first release was delivered at speed and with laser focus.

Ethical considerations prevent me from mentioning managers by name, you know who you are, and know how grateful I am to you. As well as helping me develop the concepts, each of you has helped me improve my thinking and writing, and this is what I want to publicly thank you for.

Thank you, all of you.

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About the author

Russ “The Agiliser” Lewis designs and leads transformations of very large organisations. He is an organisational coach, mentor, and consultant; coaching executives, working with leadership teams, and helping managers at all levels to improve their organisations with their teams.

As a practitioner and doctoral candidate, Russ is researching the emerging role of managers in the digital age. His thesis is that managers at every level *would* lead the improvement of their organisations *if* the conditions allowed.

An early adopter of Agile methods and service-based architectures, Russ designed, built, and led the team that developed Transport for London’s contactless fares billing system. His software systems have supported functions within Best Western Hotels, British Telecom, Toyota, and the Metropolitan police. His one-week kick-start for agile development assured the success of scores of teams. He has rescued countless IT projects and improvement programmes, and designs and leads large-scale business agility and digital transformations.

Russ was formally trained as a mechanical engineer (aerospace) at Rolls Royce’s technical college. Everything after that he learned himself, mostly through error although there have been some trials too. Perplexed by the obsessive separation of management and workers that characterised British industry at the time, he was assigned to the computing department. Wisely keeping him away from their precious mainframe computers, they stuck him in front of a computer not much bigger than a microwave oven. It was the world’s first desktop computer, and it came with a small book on programming. Captivated by this handwritten book, with its drawings of bugs, Russ learned about computers and how to program them.

Russ lives in Oxfordshire with his wife, daughter, son, a dog, and a cat.

Introduction

The manager's world has changed. Middle managers considered "frozen" are blamed for everything wrong with work. Instead of getting recognition for magically keeping everything going, they are allegedly responsible for preventing change and maintaining bureaucracy. Their hours are ridiculously long because there is an ever-increasing amount of administration to get through and an ever-decreasing number of people to do it. If there was a better job to go to, they may take it, but most sectors have similar management and operating models.

Those high-enough up in the hierarchy to be styled as "leaders" are experiencing unprecedented transparency and uncertainty. The size of a large organisation generates so many upwards-facing priorities that it has to operate by downward delegation and upward reporting. Yet the hard work, expertise, and quick decision-making that brought them to the top seem to have lost the long-term impact they once had. What used to be a complicated business that "ran by the numbers," has become a complex web of forces and it feels like there is nothing solid to stand-on anymore. The best options are staying for the long haul by keeping one's head down, or making a big impact fast, to get to the next position.

Agile for Managers considers this situation from the perspective of all managers (top, middle, bottom, or whatever). It asks:

How can we make better decisions right now?

How can established firms transition to the digital age?

What is happening to organisations and why?

Answering these questions helps managers navigate one of the most ambiguous jobs ever devised. One part at a time, managers will be able to:

Part one; improve today's operations by making better-informed and more powerful decisions,

Part two; create the conditions to improve organisational effectiveness, and

Part three; draw from evidence-based research to develop their professional knowledge.

Next, I will describe each part in more detail so you can decide how to engage with the material.

Part one. Digital age decision-making and Control

Improving operations by making powerful decisions and selecting appropriate controls.

This part is a practical guide for smart managers, who want to know how to increase *business agility* to improve operational effectiveness. I provide the tools and techniques, and trust readers to apply their resourcefulness and expertise to work-out how to use them.

Section I is intended to be a very quick read, a little more than a brochure. It provides just-enough “big picture” information to inspire the most transformational readers to set a direction and start leading improvements.

For those who want more detail before they act, Sections II and III describe ways to improve organisational effectiveness, from a manager’s perspective. Where the first section provides a blueprint, these sections describe the mechanisms for better decision-making and agile delivery, respectively.

Let me tell you a bit more about the sections and chapters.

Section I – The Operating Model

Using business language throughout and moving at pace, I provide a big-picture, insightful look at the way large, established organisations operate and struggle. I spotlight details that are normally invisible, giving managers the power to make better-informed decisions and select appropriate control mechanisms. We build-up a version of the operating model and the hidden forces that shape it, so you can lead the improvements that will be most important for your area of the organisation. It is organised:

Chapter 1. Running and changing the business; the lens described in chapter 1 reveals crucial new information. That gives you the power to match each situation with the appropriate control mechanism, making your responsibilities easier to manage, and more likely to succeed.

Chapter 2. Making investment decisions that increase profits; factoring the “cost of delay” into decision-making will help you balance the need to reduce costs, with the financial implications of that view. It is super-easy to do this when you know which data to compare.

Chapter 3. Decision-making as an improvable process; experience and “gut instinct” still feature in the digital age, just not as much as they have in the past. Systematising decisions, as described here, will increase the speed and quality of the services you deliver, and help you manage its continual improvement.

Chapter 4. Preventing inexcusable wastes; feedback mechanisms are easy to build and simple to operate. It is a wonder they are so often overlooked or misunderstood as they are guaranteed to protect your sources of profit, both existing and exploratory.

Chapter 5. Amplifying customer value; there is more to an organisation than can be seen or measured. Since managers shape the work context, they are ideally positioned to amplify the capabilities needed to increase the flow of value to customers in the digital age.

Chapter 6. Not your grandfather's workplace; investigates the emerging role of the manager as leader of business agility improvement. I propose three ways managers can transform their organisations today.

Section II - Effective prioritisation and decision-Making

Diving deeply into something taken for granted, this section is a thought-provoking examination of the decision-making systems needed to run an effective business operation. I describe how prioritising demand creates clarity and alignment throughout the business, how to set measurable outcomes, how to match demand to capacity, and how to connect strategy with execution. This section includes:

Chapter 7. Prioritising work when capacity is limited; we confront the tension between internal demand and internal capacity, as experienced by managers of functions that support the business. Since delivery capacity is limited, prioritisation has a significant impact on organisational performance, and we must manage it accordingly.

Chapter 8. Elevating decisions only humans can make; keeping our focus on prioritisation, we examine decision-making as a process. Taken for granted within hierarchies, human decision-makers often slow-down the flow of customer value. Inviting managers to re-frame those humans as constrained resources, helps to improve internal control mechanisms.

Chapter 9. Predicting capacity for emergent value activities; organisations rely on predictive assumptions so they and their stakeholder can plan accordingly. Although plans usually work for predictable value activities, they rarely survive emergent or human-based activities. Uncertainty of this nature cannot be centrally managed, which is why the agile approach is to engage with stakeholders and share information transparently.

Chapter 10. Measures that improve performance; are another form of prioritisation. Deciding the very few measures that matter to the organisation and its customers provides focus and clarity. They help people resolve the conflicting priorities and filter-out the noise that develops.

Chapter 11. Activating emergent strategy creation; recognises strategy in the digital age must respond dynamically to technical and market change, whilst following certain unchanging principles. We explore a way to engage the workforce's creativity and expertise to achieve outcomes with clearly defined objectives and key results (OKRs).

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Part one. Digital Age Decision-Making

Section I. The Operating Model

1 Running and changing the Business

This chapter helps you increase agility by matching predictable and emergent activities with the appropriate controls.

Predictable and emergent Characteristics

The lens of predictability and emergence is powerful because it reveals the challenges hidden within each situation. With this information, your expertise and wisdom will guide you to make the right decisions.

We use different operating systems for planning and for doing. Where planning is rational, based on prediction and assumption, doing is intuitive. We respond to emergent patterns in the moment. The *predictable* system is complicated, like a mechanical watch. Each watch is built to a predetermined technical specification based on well-known and reliable principles, then behaves exactly as its designer expects. The *emergent* system is complex, and highly unpredictable. “Ah-ha” insights and game-changing discoveries come unexpectedly. Such as:

When Alexander Fleming returned from his holidays, he noticed something strange in a petri dish in his laboratory, and then isolated a mould able to kill bacteria. Fleming was a bacteriologist, so it was *likely* that his work would contribute to that field of knowledge. But Fleming’s discovery occurred in 1928, fourteen years before the first patient was treated with penicillin. Penicillin *emerged* from Fleming’s discovery over time.¹

What, when, and how emergent work delivers value, is only known after it has happened. Whereas, obtaining predictable value is often the result of planning and coordinating resources. Industrial age wealth was mostly created by organising, market research, product design, technical design, marketing, manufacture, and distribution resources. Of course, the competence to predict, plan, and control organisations is another resource. Emergent value, such as converting a naturally occurring bacterium into life-saving penicillin, depends on the situation and the prevailing conditions. Nobody could predict who would read about Fleming’s discovery; how curious they were to follow-up; what else was known at the time; what funding would become available; or who else would get involved.

Balancing run and change Activities

Most managers are familiar with the difference between “run” and “change.” This lens differentiates activities that mainly produce predictable, or emergent value. Activities that deliver predictable value allow “Operations” to “run the business.” But as external conditions change, so do the markets that supply money to that business, both as consumers of its services and financiers of its ambitions. Therefore, businesses must also innovate, and “change the business” to stimulate financial growth and respond to changes in their market. Even non-commercial organisations must adapt to the evolving needs of the society they serve. Organisational “ambidexterity” is therefore desirable, if not essential.

The challenge is balancing both forces at the same time by recognising the overlaps and tensions between them. Most large, existing organisations solve this problem structurally, separating run and change into different departments. We may dislike some consequences of “silos,” but they enable operations functions to optimise for predictable value activities, leaving research and development departments free to work on emergent value activities.

These characteristics are summarised in Table 1 below:

	Emergent value activities	Predictable value activities
Characteristics	Solutions emerge over time, or not.	Solutions and necessary resources are predetermined.
	Being effective is more important than being efficient.	Efficiency is necessary to maintain profits and competitiveness.
Forces	Mostly changing the business	Mostly running the business
Challenge	Balancing forces and tensions	

Table 1 Characteristics of predictable and emergent value activities

Agile control mechanisms match emergent value Activities

Imagine you are funding an emergent value activity, such as the development of a new smart billing and contactless fares system. You would want to know if your investment is going to pay-off and how much over-budget it is going to be. According to Shashi Verma, who was in this situation in 2012, once the work has begun, the next key decision is to “decide if you can trust your team to deliver.”²

The team published a list of the outstanding outcomes and provided regular updates on progress. In June it looked like Table 2 below:

Month	Planned goal	What actually happened
Mar	Build prototype engine to construct simple journeys only	Processed 1m journeys in 6 minutes in memory but took 2 hours when written to the database.
Apr	Support multi-stage journeys (like a sat-nav in reverse)	Threw-away code and rebuilt as state engine, storing only state changes.
May	Provide user interface and user-friendly testing language	Not in the original plan, but people were getting curious and keen to see if the engine could reconstruct their journeys to work.
Jun	Add logic for all fifty journey types	
Jul	Build journey pricing service	
Aug	Support pre-purchased tickets and daily charge capping	
Sept	User and admin interfaces	
Oct	Soft launch & investigate weekly charge capping	
Nov	Wider launch and user interface refinement	
Dec	Documentation	

Table 2 Agile delivery plan

The list is both a record of progress and a plan. That is appropriate because it is still emerging. Other points worth noticing are:

The team delivered consistently according to its predictions for previous months. The most-difficult challenges were prioritised, leaving easier (less risky) work for later.

Change was welcomed. In May, someone had the insight to open-up testing to stakeholders.

Agile practices ensured the cost and mission remained fixed throughout, allowing stakeholders to both control the work, and adapt to opportunities and obstacles.

That was an example of how agile practices provide simple and effective controls for emergent value activities. The outcome provides the direction, but the way to reach it, and what the solution is, remains unknown until the solution is up and running. In this case, work was completed on-time and to budget.

It enabled Transport for London to deliver a contactless fares capability to London’s buses, then to the entire public transport network.³

Of course, there are many parts to any project. The predictable parts can be managed using plan-driven controls, but specific areas of uncertainty may benefit from agile controls. I introduced the distinction so that we can be aware of it in the real-world. To support that aim, let us compare controlling emergent and predictable value activities.

Comparing control Mechanisms

When the activity’s output is known, the solution and most of the problems encountered whilst getting there, are predictable. Much of what we do has a predetermined solution. Provisioning a new data centre, migrating to the next version of Windows, moving to, or building a new house are best managed by predicting, planning, and controlling resources and activities. I do not doubt readers are familiar with “plan-driven” controls since traditional project management methods are strongly plan-driven.

Adding financial controls to the comparison, reveals how feedback helps decision-making by signalling when to stop, reduce, or increase the funding of the activity. This works because the funding controls the capacity, and capacity controls output. See Table 3 below:

	Emergent value activities	Predictable value activities
Control mechanisms	“Inspect and adapt” provides adaptive <i>outcome</i> -based control.	“Plan-driven” control compares <i>output</i> to predetermined plans.
	Daily inspection of progress made progress towards desired outcome and weekly adaptation of the methods used.	Performance indicators send signals for managers to interpret (eg. throughput over time, number of defects).
Financial control	Stop funding when nothing of value has emerged for three months. Confirmed by “go and see.”	Stop funding when production is no longer profitable. Provided by feedback loops (eg. matching supply to actual demand).

Table 3 Controls of predictable and emergent value activities

Predictable value activities produce measurable revenues or satisfy actual customer orders. There are no similar mechanisms for emergent activities other than being physically present and using one’s

senses to decide if the activity is valuable or not. It is for situations like these that quality improvement and management guru W Edwards Deming, who was actually a statistician, warned managers:

“One cannot be successful on visible figures alone.”

W Edwards Deming ⁴

Smart readers will be ahead of me, realising that once a solution has emerged, it starts to move towards predictability. This movement is one reason that balancing these activities is so difficult. Whilst *efficiency* applies to producing predictable value, it is *effectiveness* that matters when developing solutions. And both activities benefit from continuous improvement.

Improving the Activities

When it comes to improvement, managers must make another important distinction. Predictable value activities can be made more efficient because the output has been predetermined, whereas emergent value activities become more effective at producing an outcome.

To select the right improvement approach, we need to recognise how value is added in each activity type.

Adding predictable Value

Although we know everyone makes a unique contribution at work, and customer value matters above all other considerations, improvements are often made on the assumption that *workers* need to become more productive. This is partially true for predictable value activities, where resources can be replaced by faster or cheaper versions. Machines and facilities, as well as managers and workers, are candidates for this method of improvement. Moral concerns notwithstanding, it can leave people feeling like they are valued as though nothing more than a cog in the machine.

Machines, and the corresponding “machine model” mentality, have changed over time, but slowly. To put that rate of change into perspective, and based on my understanding of events:

Adam Smith’s “division of labour” has been improving the efficiency of complicated and predictable work ever since his publication in 1776 of transforming pin manufacturing (measured by productivity).

Henry Ford improved efficiency (measured by time) of mass production by removing as much variation as possible from the Model T’s production processes.

After WW2, as Japan was rebuilding its economy, Taiichi Ohno developed “Just In Time” production to improve efficiency (measured by waste reduction) at Toyota.

These pioneers built-on previously established knowledge and improved already-established production methods. Their improvements are seen as transformational now because we know that they work, and why. But it took time and evidence for most manufacturers to adopt their innovations.

Adding emergent Value

Various customer-centric approaches were developed in the 1990s and these, combined with emerging design philosophies, created the conditions for the technology transformation we now experience. Agile, as a term, was chosen by software developers. In 2001, it represented “better ways of developing software” than the prevailing approaches.

Software solutions emerge as the result of collaborative design and experimentation, not the production of a predetermined design. Hence, the authors of the Agile Manifesto for Software Development showed how the complex and emergent work of solving a poorly defined set of problems is more effective when the development team collaborates both with the problem-owners, and each other.

Emergent value depends on people interacting with technology, collaboratively. The social aspect of this work is as important as the technical, but impossible for us to define precisely at the moment.

Although managers are sometimes uncomfortable when “soft skills” enter the workplace, psychological factors are bound to affect performance when people use brainpower to create value. Managers create the conditions of work by the ways they behave, actions they take and the language they use. Therefore, managers can improve the effectiveness of emergent value activities by creating the micro conditions needed to understand complex situations and find-out what happens as they try to address them. Appropriate tactics include:

Acting more like a coach than a controller.

Focussing on collaboration, clarity, and learning.

Building trust and increasing autonomy.

Actively listening to people without presuming to solve their problems.

We saw how trust and autonomy were critical for developing TfL’s contactless fares system. Google’s research into managing showed that their best managers use coaching techniques⁵ and their most effective teams; feel safe, feel like they can depend on each other, have clear goals, know their purpose, and believe their work has impact.⁶

Perhaps the biggest impact on effectiveness comes from handing-over the control of the methods of doing work, to the people who are doing that work. The reason is simple, the restrictions of one-size-fits-all processes makes predictable work more efficient, but the effectiveness of emergent value work depends on the variety provided by its participants.

“Agile development focuses on the talents and skills of individuals and molds process to specific people and teams, not the other way around.”

Alistair Cockburn & Jim Highsmith⁷

Recognising the difference between predictable and emergent value activity situations tells managers which control mechanisms and strategies are appropriate. This is summarised in the comparison Table 4 below:

	Emergent value activities	Predictable value activities
Value added by	“Soft skills” that create optimum conditions (eg. trust, diversity, openness, autonomy).	Improving the process and reducing variation to increase throughput (eg. towards mass-production).
	Noticing patterns and intervening when anti-patterns are recognised.	Reducing costs by outsourcing and resource optimisation.
Process control	People-first.	Process-first.
Improvement strategy	People create, control, and improve their own processes.	Processes designed and optimised by experts.
	Encourage variety of output, reduce variation within each process.	Limit variety of output, and eliminate variation in all processes.
Growth strategy	Produce greater variety of products and services.	Produce as much as possible of the same.

Table 4 Value and improvement characteristics of predictable and emergent value activities

Summarising the Situation

The situation has changed from when we set out together, so I suggest we pause for a moment to review. Military strategists recognise the value of “situational awareness,” and it is common sense, yet we can be so busy we forget to reflect. Cults protect themselves from common sense by making sure any new information is rejected or ridiculed before it can change member’s beliefs. We are smarter than that.

The need for organisations to balance both “run” and “change” the business, was our first consideration. Separating these activities structurally was effective in the machine age, when an investment decision resulted in separate design, build, and operate activities. Operations looked-after making profits, and it did not matter if design and build were separate silos or even different companies, since the output of each stage predicted the value produced by the next. Dividing work by function improved efficiency, as the pioneers of mass production showed.

In the digital age, more of what customers value is developed collaboratively. Value emerges through understanding customer behaviour, experimenting with technology, and collaborating to create new solutions. Variety is valuable in this context. People doing the work develop and improve their processes as part of their work. Such self-organising behaviour characterises agile practices and increases business agility.

Agile methods are most appropriate for complex situations such as emergent value-creating activities. Predict, plan, and control, or plan-driven methods suit complicated, repetitive activities. Efficiency of these activities can be increased by reducing both the variety of the output, and variation of the processes that produces it (mass production). Henry Ford’s goal was to produce cars more quickly than anyone else, so he chose a single colour for all cars and parts. Black was probably cheaper and more reliable than other colours.⁸

The predictable and emergent lens helps us appreciate these differences and make decisions that are more appropriate when controlling and improving activities at work.

Practical Application

Thinking about the activities within your business unit, which produce mostly emergent value, and which are more predictable?

Where do they overlap?

What emergent value steps do you notice within predictable value activities?