

Wrapping PRINCE2® around Agile You can, but should you?

About this White Paper

Is PRINCE2 effective as a governance wrapper for an Agile framework like Scrum? This paper explores the issues and questions that need to be resolved for organisations that want to combine these two approaches.

Author

Roger Fance
Principal Consultant
UXC Consulting

TABLE OF CONTENTS

- Executive Summary 1
- Introduction: The current climate of change 2
- Combining Agile with PRINCE2 2
- Scrum framework 3
- Why combine PRINCE2 with Scrum? 3
- How to combine PRINCE2 with Scrum..... 4
- Mapping PRINCE2 and Scrum Activities 4
- Using Scrum to Execute a Work Package 4
- Comparing the approach and characteristics of Agile and PRINCE2..... 6
- Command and control vs collaboration 6
- Management by exception vs management by rhythm 6
- Planning vs plans 6
- Tailoring PRINCE2..... 7
- Risk and change management 7
- Value realisation 8
- Conclusion 8
- About the author..... 9
- Further reading 9

EXECUTIVE SUMMARY

Over the years, many organisations have invested heavily to increase the chances of project success by establishing project management frameworks, methodologies, processes, tools, templates and training to support their project managers and teams and improve project management maturity.

However, an ever increasing speed of change as a result of competition and technological innovation presents a serious challenge to business. It compels the need for continual re-evaluation of the project methods employed to ensure that organisations are responsive and adaptable enough not only to simply survive, but prosper.

Some organisations have turned to Agile project management in an effort to improve their response to business change. In the right circumstances, Agile offers an effective way to rapidly react to change, indeed embrace change, through a range of management techniques. Some may be tempted to combine their original investment in traditional project management techniques like PRINCE2 with the benefits that Agile can bring.

This paper suggests two ways that PRINCE2 and Scrum as an Agile framework could be combined and compares the characteristics of each approach in relation to governance, planning, risk, change and value delivery. It poses some questions that organisations should consider before trying to combine these two approaches.

INTRODUCTION: THE CURRENT CLIMATE OF CHANGE

Over the years, many organisations have invested heavily to increase the chances of project success by establishing and embedding project management frameworks, methodologies, processes, tools, templates and training to support their project managers and teams and improve project management maturity.

However, an ever increasing speed of change as a result of competition and technological innovation presents a serious challenge to business. It compels the need for continual re-evaluation of the project methods employed to ensure that organisations are responsive and adaptable enough not only to simply survive, but prosper.

“You can’t just ask customers what they want and give that to them. By the time you get it built, they’ll want something new”.

COMBINING AGILE WITH PRINCE2

Some organisations have turned to Agile practices in an effort to improve their response to business change. In the right circumstances, Agile offers an effective way to rapidly react to change, indeed embrace change, through a range of management techniques. Some may be tempted to combine their original investment in traditional project management techniques like PRINCE2 with the benefits that Agile can bring. However, the challenges associated with doing this can be greater than they first appear.

Agile techniques are best suited to the development of emergent and innovative products like pharmaceuticals, consumer electronics or software. In these circumstances, requirements are often not well understood up front and yet, there is a time-to-market imperative which demands the rapid delivery of customer value. As leader of one of the most innovative companies in the world, Apple, Steve Jobs once said “A lot of times, people don’t know what they want until you show them”. Further, requirements often rapidly change over time. Steve Jobs again: “You can’t just ask customers what they want and give that to them. By the time you get it built, they’ll want something new”. The adoption of iterative development and incremental delivery helps to address these business problems.

On the other hand, the origins of PRINCE2 began when the sequential “waterfall” method for delivering software projects was the dominant paradigm. To acknowledge that there are other ways to deliver projects and to remain relevant, PRINCE2 has been adapted and become more generalised compared to its sole early use to deliver government information systems. There is also explicit recognition that PRINCE2 should be tailored to suit the circumstances, in fact this is one of the seven key principles of PRINCE2.

Has this process of adaption gone far enough to permit PRINCE2 integration with Agile? What are the benefits and limitations of doing so? Should organisations even try?

Scrum framework

This article assumes a context where a company is developing a new and innovative product in-house with a significant software development component and has the need to get the product to market quickly to beat the competition. There are a number of different Agile approaches that can be employed. Of these, Scrum is by far the most dominant with up to a 66 per cent adoption rate and therefore is a good candidate to assess compatibility with PRINCE2.

Scrum is the dominant Agile approach, with a 66 per cent adoption rate.

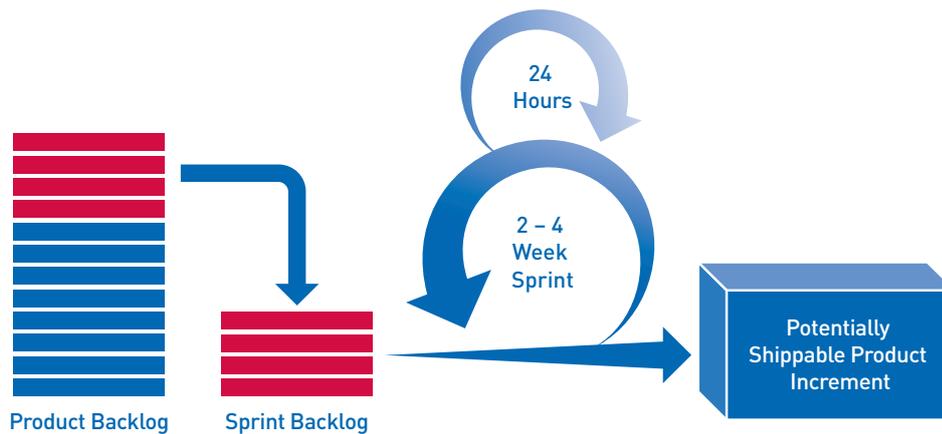


Figure 1: The Scrum Framework

Why combine PRINCE2 with Scrum?

Let's start by looking at the reasons why an organisation might want to combine PRINCE2 and Scrum.

As previously indicated, a significant driver is the desire to be more responsive to change without throwing away the previous investment in establishing and maintaining PRINCE2.

Scrum focuses on the tactical delivery of production-ready products, in this case, software. However, it is quiet on higher level governance, the business case or project initiation for example. It is also more limited in its usefulness to address related deliverables, activities and tasks such as production implementation, associated operational changes, training and marketing activities. For this, an overarching approach is needed and PRINCE2 potentially fulfils this need.

By combining PRINCE2 and Scrum, an organisation could theoretically respond more quickly to changing requirements and uncertainty whilst still providing a traditional level of comfort that the overall project direction is under control.

How to combine PRINCE2 with Scrum

So, now that we have established why an organisation might want to combine a heavy-weight methodology like PRINCE2 and a light-weight framework like Scrum, let's look at how PRINCE2 and Scrum could be combined.

Mapping PRINCE2 and Scrum Activities

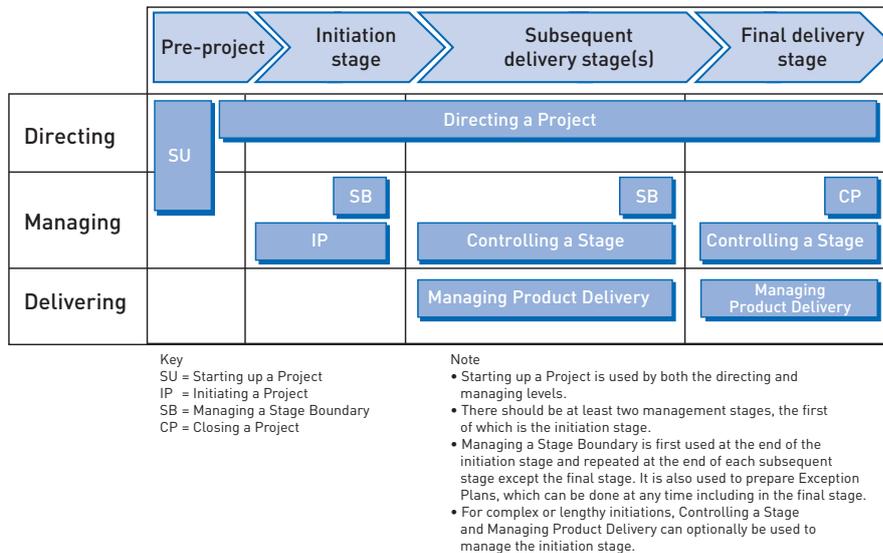
One way is to map each PRINCE2 activity to an equivalent Scrum activity. However, what soon becomes clear is that this is relatively futile as we are trying to map a set of fine-grained activities with coarse-grained ones. For example, many of the activities identified in PRINCE2 would map with Sprint 0 planning in Scrum such as establishing a large range of plans, controls, approaches, acceptance criteria, tolerances, tools and logs. However, to address the need to deliver business value quickly, sprints are usually short in duration, often two weeks, sometimes even less. This would mean that PRINCE2 processes would likely only be completed at a high level in the constraining timeframe. In general, there is a PRINCE2-to-Scrum mapping trend of many-to-few which diminishes the usefulness and value of the management products.

This attempt to directly map PRINCE2 and Scrum activities also brings into focus the role of the Project Manager. A PRINCE2 project manager has overall responsibility for planning, managing, monitoring and delivering the outputs of a project. Delivering these outputs is often done in conjunction with one or more team managers. The role of PRINCE2 Project Manager is divided between Product Owner, ScrumMaster and to some extent, the team in Scrum. A ScrumMaster is a facilitator, a servant-leader, who is responsible for ensuring adherence to Scrum theory and practices, effective coaching and teaching of all stakeholders, communicating vision, goals and backlog items to the development team, facilitating Scrum events and removing impediments that prevent the team making progress. The ScrumMaster does not have sole ownership for planning the project or its iterations (Sprints), does not direct the team and is not responsible for the delivery of project outputs; these are the responsibilities of the team members and product owner. These differences in approach make it very difficult, if not impossible, for a single individual to comply with the competing priorities of Project Manager and ScrumMaster roles. The Product Owner and PRINCE2 Project Manager roles are more compatible as the Product Owner is responsible for prioritising the work and ensuring delivery of the required outputs. However, whilst these roles overlap to some extent, they do not align neatly and so again; these differing responsibilities are difficult to vest in a single person.

Using Scrum to Execute a Work Package

The much more common approach for trying to combine Scrum and PRINCE2 is to limit the use of Scrum to the Execute a Work Package activity as part of the Managing Product Delivery process.

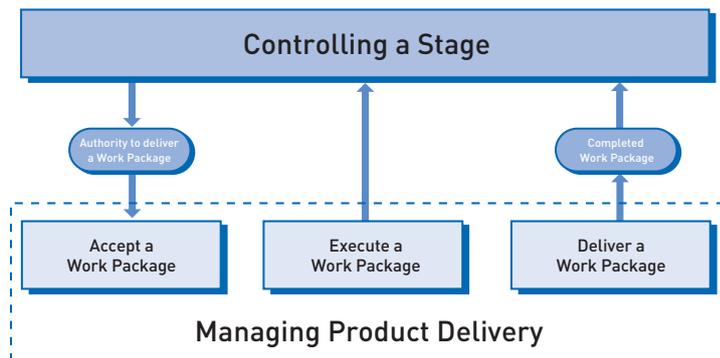
*Mapping PRINCE2
to Agile is futile.*



Can work packages be delivered using Scrum while overall project control is managed using PRINCE2?

© Crown copyright 2009. Reproduced under licence from the Cabinet Office.

Figure 2: PRINCE2 Processes



© Crown copyright 2009. Reproduced under licence from the Cabinet Office

Figure 3: Overview of Managing Product Delivery

The concept is that the higher level governance activities are managed using PRINCE2 while the management and delivery of the actual project outputs are quarantined from the rest of the processes (see Figure 3 above). This immediately overcomes the problem of the combined Project Manager/ScrumMaster role previously identified. Now, separate individuals can safely fill these roles with a Team Manager assigned the role of ScrumMaster. Further, the Product Owner role can now be fulfilled by the business and user representatives on the Project Board.

So, in practice, can work packages be delivered using Scrum while overall project control is managed using PRINCE2?

To answer this question, we need to look at the philosophical underpinnings of Agile and PRINCE2.

COMPARING THE APPROACH AND CHARACTERISTICS OF AGILE AND PRINCE2

Command and control vs collaboration

PRINCE2 is built upon a foundation of command and control. Leaders and managers exercise their authority on the project team and direct its work. Implicit is the assumption that leaders and managers are in exclusive possession of a superset of knowledge and capability compared to the delivery team. By contrast, Agile principles and practices are built upon a foundation of shared interests and collaboration. Project team members are put at the centre and are trusted to self-organise, be self-disciplined, to closely collaborate and interact with a range of cross-functional stakeholders to resolve problems and devise effective solutions.

Agile promotes collaboration between the business community and the project team as a key tenet. The underlying assumption is that the interests of stakeholders are shared. PRINCE2 by contrast explicitly acknowledges the differing interests of the key project stakeholders. This is reflected in the composition of the Project Board which consists of three roles; Executive representing the interests of the business (specifically the business needs and value for money), Senior User(s) who will use, operate, maintain and support the project outputs to realise the benefits and Senior Supplier(s) that provide the necessary skills and resources to produce the project outputs. PRINCE2 provides project controls to mitigate the gaps that can open as each party pursues differing goals arising between the tension of time, cost, scope, risk, quality and benefits. However, this approach can cause confusion and an artificial separation of roles in an organisation that is both client and supplier.

Management by exception vs management by rhythm

PRINCE2 projects are managed by exception by the senior leaders that comprise the Project Board. The assumption is that they do not have time to be involved in day-to-day activities and only need to be involved if agreed tolerances are exceeded. Day-to-day management is delegated to the Project Manager. One of the downsides of this approach is that the leadership may only focus on bad news about project progress and ignore more routine reports like Highlight Reports. This is very different to Agile, where the philosophy changes to management by rhythm. In this case, the leadership, represented by the Product Owner is closely involved in daily decisions and discussions and is part of the rhythm associated with iterations.

Planning vs plans

There is a great deal of emphasis in PRINCE2 on the development of upfront plans and a whole range of artefacts to address this including the development of long-range high-level project schedules. However, there is a growing recognition that plans and schedules are frequently obsolete almost as soon as they have been produced. Field Marshal Helmuth Graf von Moltke, Winston Churchill and Dwight D Eisenhower have all acknowledged this with variations of the quote "Planning is everything. Plans are nothing". Agile undertakes detailed planning just-in-time within the current iteration and anticipates that there will almost certainly be change which will negate or diminish longer term plans. As a result, more energy is devoted to innovation instead.

PRINCE2 is built upon a foundation of command and control.

PRINCE2 focuses on optimisation through the control of costs, timescales, quality, scope, risk and benefits. Processes are documented, measured, refined and repeated. This approach is ideal where the predictability of outcome is high and where change is unlikely. By contrast, Agile is most useful for emergent systems. In this case, results cannot be reliably predicted and therefore a different approach, one of adaptability, is required.

Agility is the ability to balance flexibility and stability. Agile practices find the balance between chaos at one end of the spectrum and rigidity at the other. Neither extreme is desirable but it is at the balancing point that there is the possibility to create something new. Plan-centric and process-centric methodologies like PRINCE2 may stifle creativity because of the dangers of over-optimisation at the expense of innovation.

So, at one end of the scale we have an adaptive approach, Agile, that addresses the management of emergent systems and at the other, PRINCE2, an anticipatory or predictive approach that best addresses low-change systems. Neither is designed to work well in the opposite domain and therefore perhaps alarm bells should start to ring about trying to combine them.

Tailoring PRINCE2

When considering combining PRINCE2 and Scrum, advocates will often counter the concern that PRINCE2 is a heavy-weight method at odds with the light-weight Scrum framework, by referring to the fact that PRINCE2 can be tailored. It is true that PRINCE2 can be tailored; in fact, there is a whole chapter in the reference manual devoted to this subject. However, there is also a commonly held misconception that tailoring is the equivalent of omitting. In other words, elements like themes, processes or documents can be ignored if there is a judgement that they are not required. This is not correct. They are interlinked in a web of dependency; omission results in loss of project control. Instead, tailoring for example can mean adopting programme or enterprise level strategies and controls or aligning terms and language to that of the enterprise or adapting management products without the loss of essential information value. The Project Manager still needs to carefully address each of the Principles, Themes and Management Products and in this regard, PRINCE2 remains a heavy-weight method. There is no such thing as PRINCE2-Lite.

Risk and change management

Another area where there is a different approach between Agile and PRINCE2 is risk. PRINCE2 places a lot of emphasis on the upfront identification, assessment and control of risk to reduce uncertainty. Agile on the other hand, embraces risk and the uncertainty that goes with it because courage and adaptability are required if truly innovative products are to emerge. These different approaches can lead to conflicted behaviours in a project team which are subject to a PRINCE2 governance wrapper over an Agile framework like Scrum. Further, the pace of change in Agile projects is high by their intrinsic nature. PRINCE2 is not designed to work well in a rapidly changing environment (with the associated risk) and the demand for formal change requests and approvals will slow an Agile team and remove one of its Agile's key benefits as well as creating a great deal of frustration and conflict.

PRINCE2 focuses on optimisation through the control of costs, timescales, quality, scope, risk and benefits.

Value realisation

How about value? One of the touted benefits of Agile is the quick and continuous delivery of real customer value, for example, production-ready software iteration by iteration. However, PRINCE2 projects are often structured to implement the software into a production environment in one of the last stages, prior to project closure. Admittedly, this is a throw-back to Waterfall methods of software development and deployment and not actually a PRINCE2 limitation. The result can be production-ready software (product) sitting on the shelf awaiting deployment instead of being put to good use as soon as possible to create business value, thereby negating one of Agile's key benefits.

Agile and PRINCE2 have fundamentally different approaches, making them difficult to reconcile.

CONCLUSION

Assessing these differing approaches in their entirety, it becomes clear that the strong benefits that each brings when implemented independently and in the appropriate circumstances becomes dramatically diluted and less effective when combined. If we draw an analogy with a car, we can agree that both the accelerator pedal and the brake pedal are important controls. However, when used together, they might result in a lot of noise and smoke, but the car is unlikely to go where you want it to.

Perhaps the biggest obstacle to achieving a desirable result by combining PRINCE2 and Agile is that the majority of project stakeholders, particularly at a senior level, may not have a clear understanding of the benefits and more importantly, drawbacks of pursuing this approach. As a result, the risk of project failure would increase greatly.

Some initial questions that should be asked:

- Can we identify a pilot project that is suitable for applying Agile development and management techniques?
- Do we have or can we get people who have strong Agile experience to increase the chances of project success?
- Have those people gained experience in a combined traditional / Agile environment?
- Can we get support from senior management to initially run one or more Agile projects without a PRINCE2 governance wrapper to test the concept?
- If we add a PRINCE2 governance wrapper later, can we still get support from senior management for closer collaboration rather than management by exception?
- Can we set up the right physical environment to support collaboration?
- Do we have the right tools?
- Can we agree large enough tolerances to ensure Agile projects are not overwhelmed by change management overhead?
- Can our project funding model support or be adapted to support rapid incremental delivery?

There is a large mindset gap between those who practice and favour Agile compared to those who have been trained to use PRINCE2. The fundamental approach is different and in large part, not easy to reconcile. PRINCE2 organisations thinking of introducing Agile practices should think very carefully about how to integrate them into their existing environment and culture. It is not as easy as it might first appear.

ABOUT THE AUTHOR

Roger Fance is a Principal Consultant at UXC Consulting.

He has 30 years international experience in Professional Services, Financial Services, Government, Telco and ICT Vendors working on both business and IT programmes and projects using a range of different approaches and methodologies.

As a Certified ScrumMaster, PRINCE2® Practitioner, MSP® Advanced Practitioner and holding an Advanced Diploma of Project Management and a Diploma of Project Management, he also heads the UXC Consulting Agile Centre of Excellence which supports clients and staff with Agile knowledge and training resources.

FURTHER READING

Analysis.Net Research 2010 *5th Annual State of Agile Development Survey*

West, David and Grant, Tom 2010 *Agile Development: Mainstream Adoption Has Changed Agility*, Forrester Research

Highsmith, J, 2004 *Agile Project Management*

Office of Government Commerce 2009 *Managing Successful Projects with PRINCE2®*

Schwaber, Ken and Sutherland, Jeff 2011 *Scrum Guide*

Adelaide Office

Level 12, 45 Grenfell Street
Adelaide SA 5000
Phone: +61 8 8231 6999

Melbourne Office

Level 15, 575 Bourke Street
Melbourne VIC 3000
Phone: +61 3 8623 1300

Malaysian Office

Level 20
Menara Standard Chartered
No. 30 Jalan Sultan Ismail
50250 Kuala Lumpur
Phone +60 3 2117 5197

Brisbane Office

Level 1, 109 Logan Road
Woolloongabba QLD 4102
Phone: +61 7 3909 8440

Perth Office

Level 2, 30 Richardson Street
West Perth WA 6005
Phone: +61 8 9321 3166

Singapore Office

Penthouse Level
Suntec Tower Three
8 Temasek Boulevard
Singapore 038988
Phone: +65 6866 3632

Canberra Office

18–20 Brindabella Circuit
Canberra Airport ACT 2609
Phone: +61 2 6222 6500

Sydney Office

Level 4, 31 Market Street
Sydney NSW 2000
Phone: +61 2 8297 4600



Local decision making, national capabilities and global best practice allows UXC Consulting to be flexible in its approach; be relevant to your needs; and provide highly skilled advisors to deliver best practice service outcomes.

World class brands coming together: GQ-AAS | Lucid IT | Opticon | Planpower

 www.uxcconsulting.com.au

 **1300 678 426**

 info@uxcconsulting.com.au

 [@UXCConsulting](https://twitter.com/UXCConsulting)

 www.linkedin.com/company/uxc-consulting