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Bridging the gap between Waterfall PM and Agile Implementation

Focusing on the financial industry

Two different worlds
In our fast-paced world, efficient project management has become crucial. Diverse organizations are taking advantage of technology and depending on project management systems to deliver their projects successfully. Whether it is time management, team workflow management, controlling, reporting, or risk management, project management systems and methods will help to ensure that the whole project remains on track. Project management (PM) nowadays serves to handle two worlds: the old Waterfall PM at management level, and the new Agile Implementation at the operational level.

The main topic of this article deals with the challenges between the old Waterfall PM and the new Agile Implementation method. Which differences exist between these two and what can be done to bring them together in our changing world and its industries, therefore especially inside of the financial industry?

What about the financial industry?
The financial industry, with its legacy systems and processes, continuously demands more projects with a fast time-to-market conversion. Therefore, digitalization is needed as a driver to revolutionize the industry. Companies disseminate information about products and services,

processes or customer behavior in electronic form. The products and services themselves are digital. Furthermore, the speed and power of these digital structural changes is often underestimated. Traditional banks are clear late adopters when compared to other competitors (e.g., Digital Banks) or industries. It is then in their best interests to implement innovative digital solutions to remain relevant and not lose the connection to either complementary third-party product offerings, or competitors. ❯

The banking sector, with long-term projects (over one year), is facing a tremendous change within the next 3 to 5 years. This time of transformation is a major strategic challenge for the executive management of every bank – which is probably the largest in the world in recent decades. This sustainable transformation and development ranges from the front office to the back office across every department.

The professional and personal requirements as well as the qualitative competences required from the employees raise with the time. Above all, high levels of IT competence and IT affinity are becoming increasingly important to all employees and executives. The complexity of IT and the growing security requirements of the digital age are enlarging the number of software solutions, business apps and platforms that support the business. Active cooperation between management and IT consultants is a practical idea to properly adapt and integrate security and business processes.

Issues Only

Focusing on the financial industry and its digitalization, three key issues within project management can be identified:

1. **Cost pressure:** The persistently low interest rates, increasing competition due to globalization and digitalization, the related worldwide comparability of products and services, and the continuing regulatory pressure occupy the financial sector. These factors, amongst others, lead to a permanent cost pressure to stay competitive.

2. **Less innovation driven:** The financial industry is not famous for great innovations. One reason is the slow time-to-market movement mainly due to old Waterfall projects. Furthermore, innovations are slowed down because new Agile approaches are perhaps known by senior management, but not implemented. As a result, only a small

percentage of projects are carried out with Agile methodologies in a reasonable time-to-market. Especially in large traditional organizations with established structures, processes and old hierarchies are not set up for innovation driven approaches and changes. Organizations have to rethink their structures and processes.

3. **Inadequate employees:** Finding highly skilled employees to lead and manage the balance between old Waterfall PM and new Agile implementation is very rare. In general, change, progress and innovation need room to develop to be able to move the whole business forward. In order to implement this, new young employees focusing on innovative approaches (e.g., Agile IT implementations) must be engaged and encouraged in their development.

For Waterfall project managers who have not had any contact to Agile projects in the past, an Agile project looks like a completely unstructured chaos. The mindset and approach of Waterfall and Agile project management are contrary. These project managers cannot handle the two different approaches in the right manner. Either they are skilled on old Waterfall approach or they have learnt the Agile way.

Wait! The financial industry is not lost

The proposed solution is to focus on the next 3–5 years as an interim transition phase towards a future full-scaled Agile framework. To implement well-established Agile structures across the organization, an adopted "Project Management Role Model" is the interim solution that can fill the gap. The model will still fit the Waterfall project management activities and consider the Agile implementation tasks and methods when possible. This solution focuses on four categories (communication, coordination, method and tools, and leadership), which a project manager has to fulfill nowadays between the two worlds.

1. **Communication:** the project manager is the missing link between old Waterfall and new Agile approaches. He has the responsibility to lead the team and the project by speaking and connecting both worlds. While a direct communication to the functional analysts and developers is indispensable, a different approach must be chosen when communicating to senior management: providing official Agile training and workshop sessions might not be a good idea; in large organizations with old hierarchical structures, the leaders have established their own way of working for the last decades. Thus, the project manager should become an indirect Agile coach of the transformation, in order to bring the awareness and Agile understanding on the table. This transformation from a Waterfall to an Agile mindset will not take month, but years.

2. **Coordination:** Considering the responsibilities of a project manager, he has to coordinate a) the management (e.g., program manager) on the one hand, and b) the operational team (e.g., functional analysts, developers) on the other.

a) **Management:** In contrast, the management, in most of the current projects, still wants a Waterfall approach with a known scope, fix budget and clear milestones. Therefore, the project manager has to transfer Sprint Goals/Planning into Quality Gates, and Epics into Delivery Milestones. He has to become the mediator between the developer teams and the management.

b) **Operational Team:** While IT developer teams will run in Agile (e.g., SCRUM), the corresponding counterparts (e.g., business) can use Agile approaches as well to structure their daily work on a Kanban board. This coordination and alignment is an additional part of the project management team (project manager and project management

office). For larger projects, the project manager should involve the different Product Owners on a weekly basis.

3. **Method and Tools:** At the management level, the project manager should use soft skill tools (e.g., train the trainer concept) within his daily work. Moreover, based on our experience project managers can use Design Thinking approaches combined with Agile methodologies (e.g., develop in Sprint – a Sprint is 1h long) to work on strategies and to develop new use cases for an existing product.

At the operational level, the project manager can use haptic objects. For starters, a white board, split into simple Kanban status categories (backlog, in progress, done), can be used to structure the workload for one week. Our experience shows that advanced project managers can use two Kanban boards simultaneously. One Kanban board for business (business tasks are directly linked to business Epics) and next to it another Kanban board (or sprint board) for the development team (user stories are directly linked to IT Epics). For experts, a direct co-creation board of user stories from Business and IT is the target (user stories have a business as well as an IT part and are both related to a combined epic). Especially in large financial companies (e.g., banks), the willingness and engagement of both department will take several years. Thus, we would only recommend this approach if all project members (not only the project manager) are seasoned Agile practitioners.

4. **Leadership:** A project manager is leading the project and has to (beside the team and people responsibility) focus on his deliverables. Each project manager is challenged by the following factors: (a) budget, (b) scope, and (c) timeline. On all deliverables, the old Waterfall approach does not fit the Agile world.
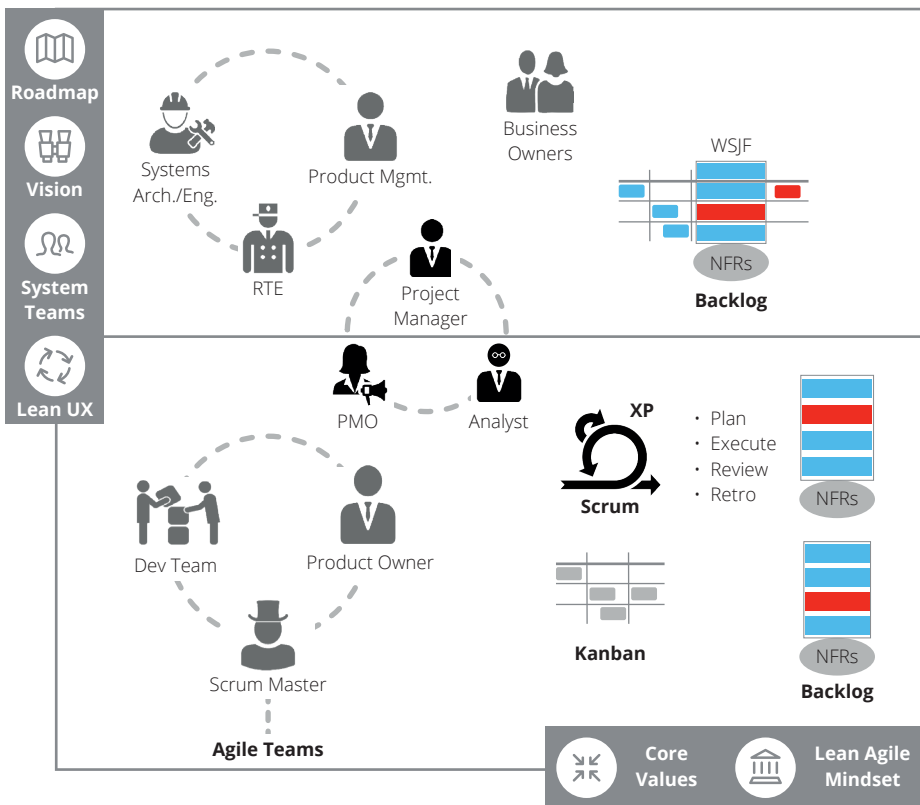
a) **Budget:** The project manager will not get a cost of all features at the beginning of the project (i.e., Sprint 0). He has to align with the corresponding product owner and solution architects in order to t-shirt size the features. Afterwards, he has to translate it into costs and split it to different deliverables (e.g., minimum viable product (MVP)). The estimated costs for the first deliverable should be communicated to the management with a variance estimation (e.g., 5% deviation). For each additional deliverable the project manager has to make a clear statement of the unknown risk and thus with a higher variance estimation (e.g., 30–50%). Once again, this "unclearness" will be tough to sell to the management, but it is the project managers' responsibility to handle and manage these different mindsets.

b) **Scope:** The project manager should always focus on small shippable products. He should discuss the slicing of the product or even features with his product owners. Especially, in the financial industry with big players and large programs, the project manager can even think of work packages. One idea is to execute a full technical deployment (e.g., technical Go-Live on backend systems), which is very helpful for products based on the new technologies or new infrastructure systems. Another idea is a partial technical deployment. Meaning, the project manager is "only" responsible to deliver a part of his target IT systems, allowing him to support another program. He can mitigate the risk of his own project and get a first feedback from shipped parts to production. Bottom line, the project manager has to focus on his scope deliverables, while at the same time keeping track of those tasks that directly or indirectly are connected to his success.

c) **Timeline:** Within the interims solution time, management will still ask for a specific timeline, while the different product owners will not be provided with any deadline for a production deployment (by a fix scope and budget). The project manager has to define time ranges to present before management. Project managers have to be specific enough to request a budget (quarterly, yearly etc.) from the executive level, yet flexible to enable the product owners to deliver a high value product.

The "Project Management Role Model" for the presented interims solution (focusing on the next 3–5 years) is a team of at least three people (see a holistic view on picture 1, page 4: First, a well-experienced project manager is indispensable. Second, the project management office (PMO) role has to be filled. Based on the project size the number of PMOs can differ, but at least one is required (Note: the role of traditional PMOs is also changing dramatically, but is not part of this paper). Third, a subject matter expert (i.e. Analyst) will support the project manager (i.e. with the responsibility of a team and deliverables, a product owner is needed; with no team but operational analysis tasks, an analyst is the right person).

Fig. 1 – The Project Management Role Model within SAFe
(https://www.scaledagileframework.com/#)

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