

What are key success factors of today's Management of Software-intensive System Development



Change is Key

1



SW & E/E as
organizational Core

2



Synchronizing SW,
E/E & HW Development

3



Leadership 4.0

4



Myth of Silver Bullet

5

Management of Software-intensive System Development



1

- „Tesla was a wake-up call. This started a change of mindset focusing on software (SW) & electric/electronics (E/E). Since then, the revenue based on SW increased.“
- „Product portfolios are driving SW development forward because complex systems need to be steered. Increased SW intensity is necessary to cope with flexibility and uncertainty of products.“
- „Customers are not able to run their operations without data. Therefore, also artificial intelligence is driving the development and changes the way we're working.“



2

- „Since SW & E/E are the dominant drivers, we need to deliver SW from a centralized setup towards any kind of platform. This enables different cycles of maturation.“
- „By centralizing all SW competencies, we wanted to gain speed and traction. Now we have the lever in one hand to control systems and make them robust, considering the global optimum.“
- „Everything requires the application of SW, which is different for each platform, process, architecture and tool. Already partly centralizing SW competencies enables us to use resources focused and flexible.“



3

- „The synchronization and integration of SW, E/E and hardware (HW) is currently a nightmare, due to the high number of stakeholders. We need to get better here.“
- „Strong change and configuration management needs to be established. It is crucial to update SW on the fly.“
- „HW needs to support the SW over 5-7 years. Therefore, performance needs to be budgeted into the hardware with a long-term view.“
- „There is no centralization vs. decentralization, it's about teams on projects delivering value. Cross community links are crucial to ensure this.“



4

- „To transfer HW-dominated companies into SW & E/E driven ones, top management needs to convey messages and ensure commitment of the middle management.“
- „Changes are all about communication, not about talking. Feedback needs to be collected so companies can act and adapt along with it.“
- „Leadership teams need to formulate common visions and communicate bi-directional to create feasible change formats. Feedback needs to be transparent, bottom up and top down.“



5

- „There are similar ideas and problems independent from the industry. It comes down to treat people and cultural topics the right way, no matter if its SW, HW or E/E.“
- „There is no ONE silver bullet of a universal working model.“
- „Increased centralization is an interesting idea. Still, there is not ONE specific way to deal with it.“