

SOFTWARE FACTORY A NEW SETUP FOR THE ATM CUSTOM DEVELOPMENT



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Consolidating all custom software development activities in a single Software Factory (SWF) has become an essential part of the transformation process within skyguide. To improve its efficiency as a provider of high quality, safe and deployable solutions for custom ATM software, skyguide has identified agility, automation and better resource management as crucial for its future, explain Klaus Meier, chief information officer (CIO) at skyguide, and Pierre Henri Guisan, managing director of SkySoft-ATM. The Software Factory plays an important role in fostering the DevOps culture, providing automated end-to-end services, and streamlining all software development activity. This should result in savings, improved time to operation, higher resilience and better interoperability.

“FOR SOFTWARE DEVELOPERS, IT WILL BE PROFESSIONALLY MORE REWARDING TO WORK IN A COMPANY WHOSE CORE BUSINESS IS SOFTWARE”

SKYGUIDE **Consolidating all custom software development activities in a single Software Factory under the roof of SkySoft has become a central topic within skyguide. What is a Software Factory?**

KLAUS MEIER We develop software in one single development centre with standing teams around clearly defined “products”. We could also call it a software or digital factory. In the past this was not the case because we developed software within skyguide but we also had, for some components Skysoft, our internal software company. This was inefficient because the roles were confusing: who develops, who integrates and who maintains the software? The reason why we are still developing software in-house is the fact that we still cannot buy critical components for the Virtual Centre on the market. But skyguide is not a software company. Its core is the safe management of air traffic.

PIERRE HENRI GUISAN SkySoft is a software company with its proper mindset and DNA, but also with a deep understanding of the safety critical environment of Air Traffic management (ATM). We need to distinguish between an organisation which develops software and one which integrates, deploys and runs it. Therefore, SkySoft is the ideal software development partner for skyguide.

How is the software production at skyguide currently organised?

PHG Currently all core ATM software with the exception of radar processing, but including flight data processing chains, are managed by SkySoft. Much of the radar software was developed by skyguide.

How do the Virtual Centre Programme (VCP) and the new SWF relate to each other?

KM Virtual Centre is the change agent and we are building new solutions and introducing new thinking around it. With the learnings from this strategic transformative programme, we will have to adapt the processes and methodologies within skyguide and SkySoft. Virtual Centre has greatly contributed to developing a new mindset in software development in an Agile and standardized setup.

PHG We intend to build on many things that have been introduced under VCT2, especially on the Agile framework for projects and DevOps "from Development to Operation". Incidentally, this term must be clearly defined, since "operations" in DevOps means running software, while "operations" at skyguide means Air Traffic Management.

What is your vision and what are your targets? Which changes do you expect?

KM Today we have a portfolio of projects. We define requirements and fight for resources. The future Software Factory will be a much more global proposition with the ambition to centralise all software development activities in a single standardized and automated factory according to clear priorities.

PHG A lot can be done to better connect end-to-end activities and extend the scope of development teams through integration and operational phases. This is a long-term endeavour and requires a complete change of paradigm from the multiple *modus operandi* and silos existing through the product portfolios and teams. Furthermore, it necessitates a higher degree of collaboration and communication within the various teams. Once all that scope and budget work has been done and approved, the next step will be to work on the roadmap for the next two to three years. The activities will range from deciding which teams to integrate, how to phase the various transfers, how to address teams and products with complex scopes only partially covered by the Software Factory and of course start building the organisation and the platforms. For software developers, it will be professionally more rewarding to work in a company whose core business is software.

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What are the expected benefits?

KM Once the Software Factory is fully operational, it will offer efficiency gains as all teams share common approaches and platforms, deploy an expanded area with fewer resources, and shift the most repetitive, low-value tasks through a sourcing model at better cost. There will be much less duplication of activities and confusion of roles and responsibilities. Time to market will be improved and the reaction to changing demands will be accelerated by streamlining processes and automating software delivery. Operational resilience is being enhanced as development teams will act within a DevOps-oriented deployment practice. And for all parties, ease of use and simplicity will improve.

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