

Transforming the global ERP of a multinational renewable energy company

PwC's Digital Core program is helping SMA Solar Technology AG to serve its fast-growing customer base and support international efforts to combat climate change



Introduction

As the global transition to renewable energy accelerates, the solar power industry is expanding rapidly to keep pace with rising demand. **SMA Solar Technology AG**, based in Niestetal, Germany, is part of this trend. The company is one of the world's leading specialists in photovoltaic and inverter system technology, which converts sunlight into electrical energy. SMA employs around 3,500 people in 18 countries worldwide, serving a fast-growing international customer base.

In September 2019, SMA asked PwC to take charge of an ambitious project to build a robust and scalable global digital enterprise platform called Digital Core that would enable the company to meet the business, organizational and management challenges of moving at pace into integrated solar energy technologies and business models.

As the Digital Core program's Strategic Transformation Adviser, PwC has successfully coordinated the launch of the first "release" phase, working with two global data and custom code transformation partners, SNP and smartShift. We are transferring SMA from its existing SAP enterprise resource planning (ERP) system onto SAP's innovative on-premise SAP S/4HANA (ERP) software,

which covers SMA's global operating environment for business processes, data, and applications.

This complex, ongoing digital transformation project, with several further "release" phases happening between 2023 and 2025, has already involved a "big bang" migration of more than 70 SMA legal entities and 30 production, sales and service sites worldwide to the new Digital Core platform. In total, the current project team involves more than 150 business, technology, and transformation experts from SMA and the SAP ERP team in PwC Germany's technology consulting unit.

“

“PwC's people have seamlessly integrated with our teams and impressed us with their outstanding SAP S/4HANA expertise, process analysis skills and tools, and strict project governance,” says Dr.-Ing. Johannes Kneip, SMA's executive vice-president for Technology and Digitalization. “We would always choose PwC again as a partner for such a transformation.”



What we did: strategic overview

Our first task before we launched the Digital Core project at the end of 2019 was to help SMA define the objectives and strategic design goals of a global transformation program covering business units in 18 countries. We began with a management bootcamp for SMA to review the main strategic issues, including defining the guardrails and design principles for the Digital Core journey, identifying simplification needs, prioritizing business demands and specifying the project's steering, governance and communication models.

The ultimate aim is to achieve an incremental automated conversion of SMA's existing SAP ERP platform into the new SAP S/4HANA version globally, in close collaboration with our two technical migration partners SNP and smartShift. To this end, the new Digital Core platform is designed to leverage the opportunities delivered by closely integrating SAP S/4HANA with SMA's existing Salesforce Lightning and Siemens Teamcenter enterprise applications. The benefits include more efficient, integrated project quotation processing across several systems, while conforming to agreed Digital Core design principles to ensure a consistent solution architecture and smooth migration.

As part of this transition, the project leverages data mining insights to analyse and design order-to-cash and service-related processes for SMA's business and supporting functions.

“

“PwC's expertise has enabled us to create an optimized target solution design for using SAP S/4HANA functions”, says Timo Wenzel, SMA's Program Manager Digitalization and currently responsible for the Digital Core Program. “Our collaboration has ensured that SMA's transformation journey is fully aligned with the company's future strategic direction.”

PwC's SAP S/4HANA smart greenfield approach has been critical to the successful foundation of the new Digital Core platform. The approach designs or redesigns business processes, alongside an automated system conversion and data migration method, to enable better end-to-end business execution. Working with SNP and smartShift, the approach has made it possible to implement the new SAP S/4HANA solution environment. The benefits include rapidly providing a preconfigured SAP system, full freedom to adjust and add configuration, automatic and fast adjustment of custom-code, secure loading of the application data including history.

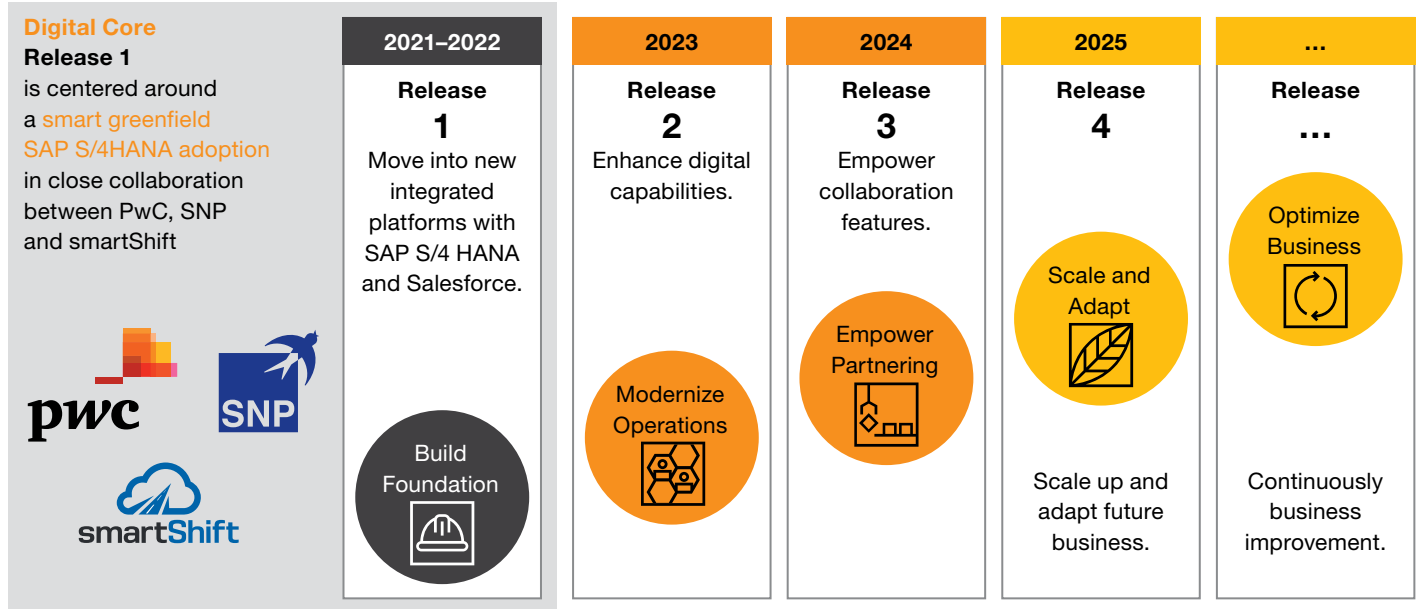
The Digital Core transformation journey, which started with the first release during the second half of 2020, involves an intensive new design and re-design phase to simplify and optimize key SMA business functions. This phase was closely coordinated with system conversion and data migration activities, which finally resulted in the global SAP S/4HANA go-live launch in October 2022.

The first release included the launch of SAP's Fiori interface, which creates business applications with a more consumer-friendly user experience via apps that can run on different devices. The solution architecture connects the platform with the full range of SAP S/4HANA enterprise applications, including Salesforce and Teamcenter. The architecture is also compatible with all relevant surrounding systems because it already partially uses MuleSoft's cloud integration software for connecting applications, data, and devices. This is the starting point for several upcoming Digital Core innovation “releases” scheduled between 2023 and 2025 (see Figure Page 4).



PwC's Long-term Transformation journey for SMA Solar Technology AG

Long-term **Digital Journey** with Rel. 1 focus on 1. transition into S4H using a selective data migration approach combined with 2. prioritized process improvements & standardizations



● DC as a program ● DC as an operating model

“

“PwC’s roadmap for the Digital Core program has created a complete transformation journey with an initial focus on the transition to SAP S/4HANA,” says Steffen Drawert, PwC Germany’s client engagement partner for SMA. “By combining system conversion and greenfield design spots along the journey, we have already delivered a stable, partially optimized and fully integrated platform foundation for further optimization, automation, and digitalization of SMA’s entire worldwide business.”

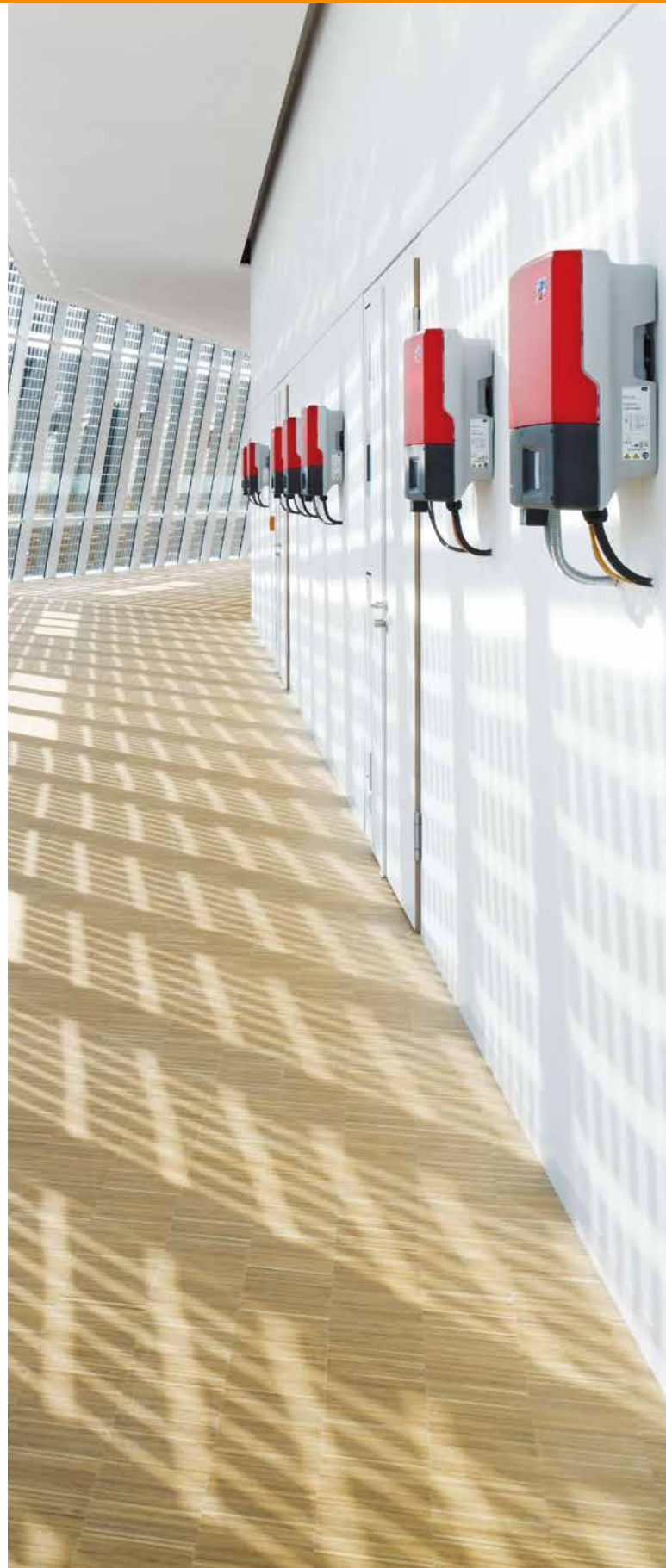
What we did: Managing the transformation

Our overall project responsibility means we are the program's strategic lead partner for setup, planning, implementation and steering across all SMA's functional processes, including order-to-cash (O2C), record-to-report (R2R), market-to-business (M2B), master data management (MDM), and analytics (ANA). We also provide support and guidance regarding the redesign of SMA's IT architecture, data migration, integrated testing, change management for SMA executives, and communications. At the same time, our rigorous project governance and established methodology support integrated solutions and the ongoing improvement of data definitions and quality during the transformation journey.

So far, more than 35 scope packages have been implemented and more than 2,500 test cases have been successfully executed, with SMA supporting the testing process with data cleansing and validation. Throughout the program we are leveraging a range of PwC digital assets, including the [Connected Journey Suite \(CJS\)](#), which will enable SMA's worldwide salesforce to interact efficiently with the new SAP S/4HANA platform.

Under our strategic direction, the project is supported by two global migration partners, providing the technical base for the new SAP S/4HANA platform. [SNP](#), based in Heidelberg, Germany, is one of the world's leading providers of software for managing complex digital transformation processes. It is responsible for selective data migration, using its software [CrystalBridge® Shell Creator](#) to create an operating SAP S/4HANA target system. The data migration journey with SNP combines established SAP transfer functionalities with automated SNP tools such as [CrystalBridge®](#), which act as accelerators.

Our second migration partner [smartShift](#), a global AI-powered solution provider based in Mannheim, Germany, specializes in automated SAP custom code remediation. In SMA's case, this means making the custom code of an existing SAP ERP Central Component application compatible with the new SAP S/4HANA code model and delivering secure, stable, and optimized code in weeks rather than the months required by conventional manual approaches.



Our Digital Core transformation journey: The next steps

During the first release phase, we have focused with SMA and our migration partners on clearing the path for SMA to transition smoothly to the SAP S/4HANA platform, using a selective data migration approach while improving processes and standardizations. At the same time, we have conducted analysis and solution design workshops for SMA business and IT teams on key business process areas in the Digital Core environment. Workshop topics include data migration strategy, master data governance, system configuration specification and telecom transition “cut-over” planning.

The next Digital Core release will focus on enhancing digital capabilities, activating collaboration features, and scaling up and strengthening the platform for SMA's increasingly digitalized future. While there is still some distance to travel before SMA completes our Digital Core transformation journey, the company is already benefitting from the emerging SAP S/4HANA platform. Thanks to Digital Core, SMA is better equipped to serve customers worldwide with optimized business services and digital capabilities and play its full part in supporting global efforts to mitigate climate change.



Contacts



Steffen Drawert
Partner
PwC Germany
steffen.drawert@pwc.com



Jochen Sonnenschein
Principal Consultant
SNP
jochen.sonnenschein@snpgroup.com



Gerhard Schwartz
Senior Account Executive
smartShift
gschwartz@smartshift.com

About us

Our clients face diverse challenges, strive to put new ideas into practice and seek expert advice. They turn to us for comprehensive support and practical solutions that deliver maximum value. Whether for a global player, a family business or a public institution, we leverage all of our assets: experience, industry knowledge, high standards of quality, commitment to innovation and the resources of our expert network in 156 countries. Building a trusting and cooperative relationship with our clients is particularly important to us – the better we know and understand our clients' needs, the more effectively we can support them.

PwC Germany. More than 12,000 dedicated people at 21 locations. €2.4 billion in turnover. The leading auditing and consulting firm in Germany.

