



Digital Project Twin

New ways to manage and control projects
with SAP S/4HANA Enterprise Portfolio and Project Management (EPPM)

Webinar, 01 July 2021

Content



Today's challenges in Engineering, Construction and Operations



The BearingPoint Digital Project Twin



SAP S/4HANA Enterprise Portfolio and Project Management



Q&A

Content



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Q&A

Companies with focus on EC&O facing multiple challenges

Challenges in project business

PRODUCTIVITY ISSUES*



LACK OF PRODUCTIVITY COMPARED TO MANUFACTURING AND EVEN THE TOTAL ECONOMY.

LACK OF INTEGRATION



NON-INTEGRATED BUSINESS PROCESSES ALONG THE ENTIRE VALUE CHAIN.

MANUAL PLANNING EFFORT

INSUFFICIENT USAGE OF IT SOLUTION TO EXECUTE AND AUTOMATE SPECIFIC PLANNING TASKS. THUS, DEPENDENCIES AND RISKS IN DATA CAN NOT BE RECOGNIZED.



FINANCIAL OPACITY

CHASING FOR THE LAST AND ACCURATE CALCULATION. MISSING TRANSPARENCY AND TRACEABILITY OF ENGINEERING CHANGES.



TECHNOLOGICAL DISRUPTION

COMPETITORS WHO CAN DEAL WITH NEW TECHNOLOGIES SUCH AS 3D PRINTING, ARTIFICIAL INTELLIGENCE (AI) OR ADDITIVE MANUFACTURING CAN DISRUPT EXISTING BUSINESS MODELS OF TRADITIONAL COMPANIES WITH FOCUS ON CONSTRUCTION, ENGINEERING AND OPERATIONS (EC&O) PROJECTS.

OUTDATED PROJECT METHODOLOGIES

USAGE OF CLASSICAL PROJECT METHODOLOGIES LEAD TO LESS FLEXIBILITY AND RISKS RATHER THAN AGILE OR HYBRID APPROACHES.



INSUFFICIENT COLLABORATION



SILLO ORGANIZED PROJECT TEAMS FOSTER INFLEXIBILITY IN CRITICAL SITUATIONS.



DATA RE-ENTERING AND INTERPRETATION

TRANSFERRING INFORMATION FROM MULTIPLE ISOLATED DATA SOURCES (E.G. EXCEL AND 3RD PARTY SYSTEMS) REQUIRES LEADS TO ADDITIONAL EFFORT.

DELAYS IN PROJECT DATA

NO REAL-TIME DATA AND MANUAL INTEGRATION OF ACTUAL DATA FROM THE CONSTRUCTION SITE.



COMPETITION

THE NEED TO POSITION THE CLIENT IN THE CENTER (CUSTOMER CENTRICITY) AND AN INCREASED DEMAND FOR HIGHLY CUSTOMIZED SOLUTIONS AS WELL AS MORE SERVICES REQUIRES FLEXIBLE STRUCTURES.



*Economist 08/2017

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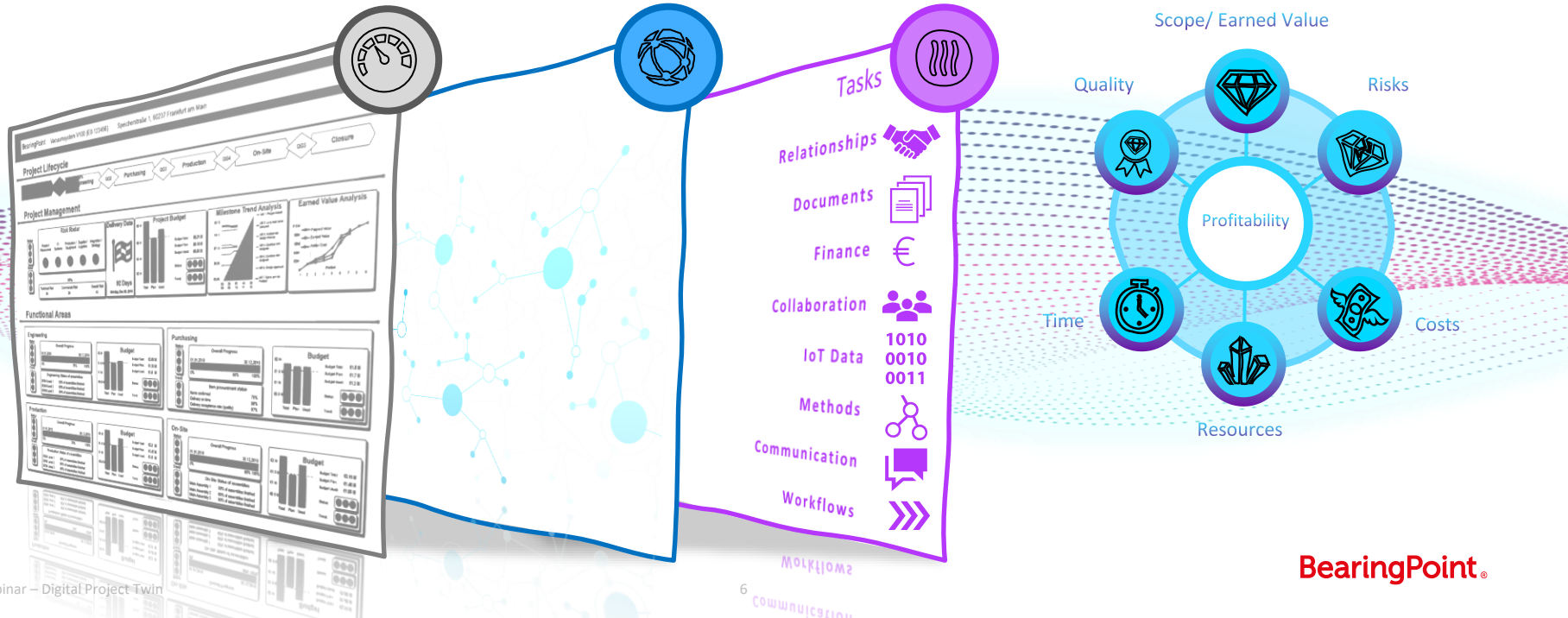
A Digital Project Twin is a virtual representation by using digits through data connectivity and integrated sensory of any kind of assets around a project as a temporary undertaking.

The Digital Project Twin definition

1.
Virtual
representation

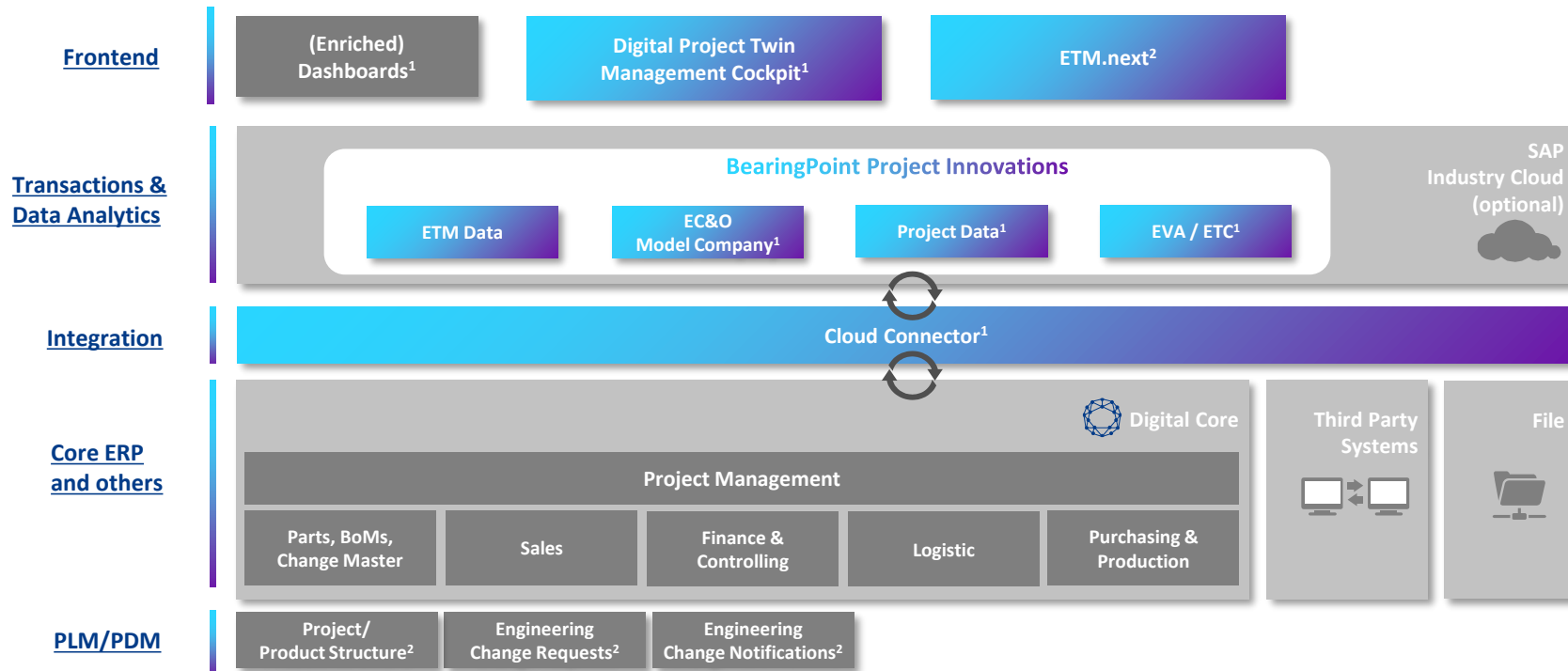
2.
Data
connectivity

3.
Integrated
sensory



The architecture building blocks are the technical foundation of the Digital Project Twin to execute Engineer to Order projects along the entire value chain

Digital Project Twin Architecture Building Blocks



¹ Part of the BearingPoint Digital Project Twin Service Offering

² Optional depending on scenario

Our proven EC&O¹ experiences based on best practices and pre-defined solutions are crucial success factors to perform business transformations successfully

Success factors for EC&O¹



Digital Project Twin Framework



- Digitising of the project value chain
- Achieve high and sustainable business value
- Efficient project business based on standardised business processes, methods such as building information management, lean management and project collaboration

Enable best-in-class digitised project business

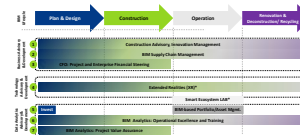


EC&O¹ Model Company



- Pre-packaged solution to accelerate time to deploy
- Ready to use documented and implemented Business Process Landscape
- Proven methodology and re-usable components and innovative EC&O¹ Add-On's to solve specific business problems

Accelerate EC&O¹ process deployments



Building Information Mgmt. Consulting

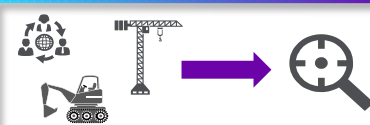


- Proven consulting services to address the entire building life cycle
- Quality improvement with less errors through digital planning and modelling in early phases
- Activity automation through provisioning of data
- Usage of real-time data and methodologies to improve collaboration

Increase efficiency along the entire building lifecycle



Equipment & Tools Management



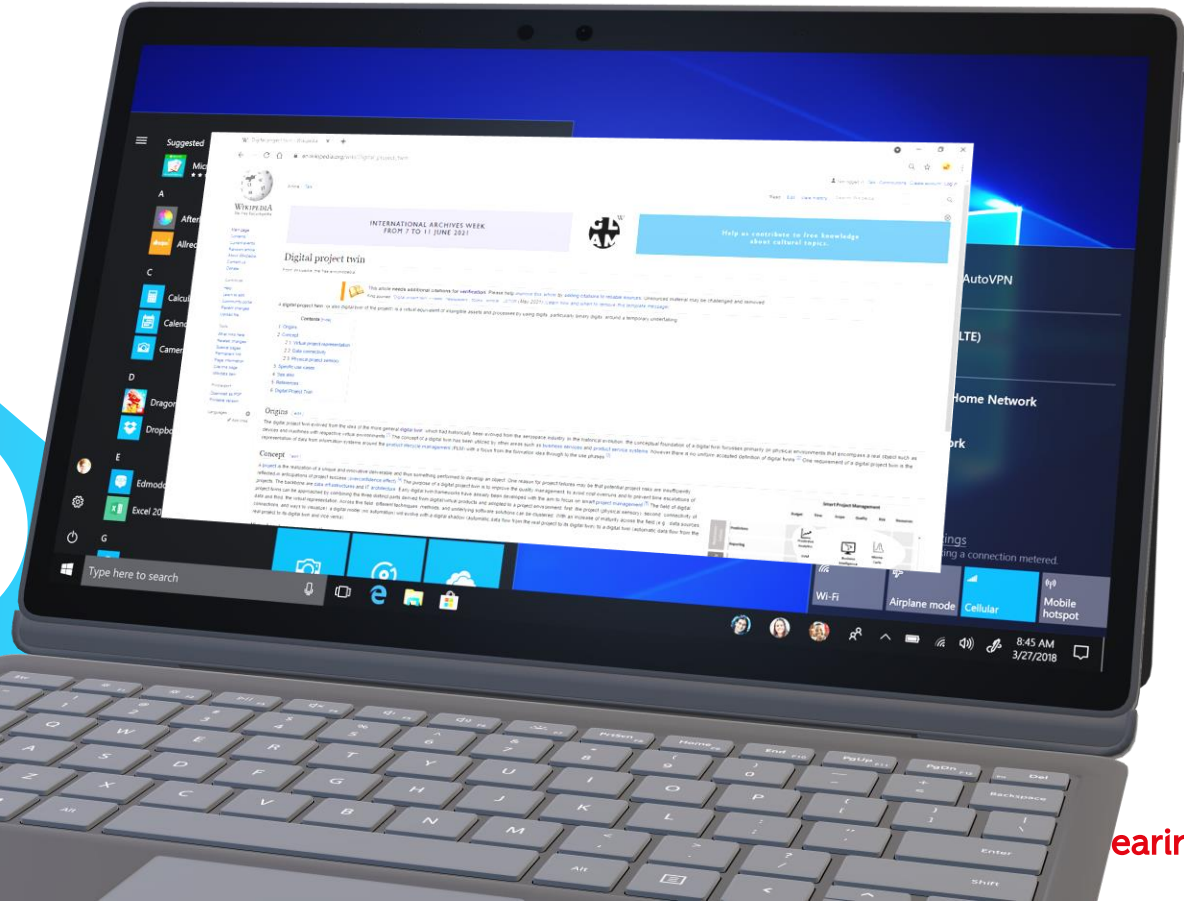
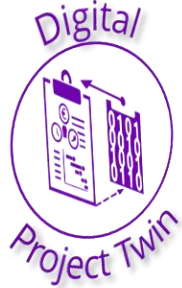
- Efficient management of critical resources
- Part of the SAP EC&O¹ industry cloud service offering
- Developed as side by side extension, offered as SaaS
- Fully integrated with SAP S/4HANA
- Major part of the SAP EC&O¹ strategy

Ensure digital and holistic management equipment & tools

¹ Engineering, Construction & Operations

We have added a new Wikipedia article with our concept of a Digital Project Twin

The Digital Project Twin @ Wikipedia



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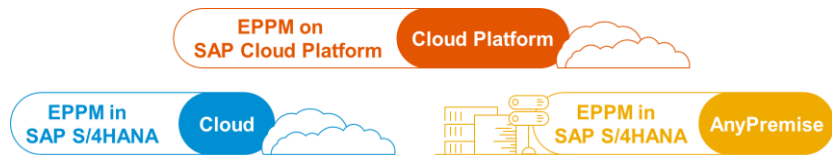
SAP S/4HANA Enterprise Portfolio and Project Management



Q&A

Different deployment options as well as building blocks of SAP Enterprise Portfolio and Project Management in S/4HANA can be selected depending on the IT strategy and business needs.

Deployment options, building blocks and supported roles



Supported Scenarios

Capital Projects

R&D, Innovation

IT

Commercial

Enterprise Portfolio and Project Management for SAP S/4HANA

SAP Fiori UX

addressing Portfolio and Project Management related roles

SAP Portfolio and Project Management for SAP S/4HANA (Add-On)

Strategic portfolio planning and operational project execution

SAP Commercial Project Management for SAP S/4HANA (Add-On)

Manage profitability, project financials and changes during execution

Project System in SAP S/4HANA Enterprise Management Project Financial Control | Project Logistics Control

SAP HANA platform

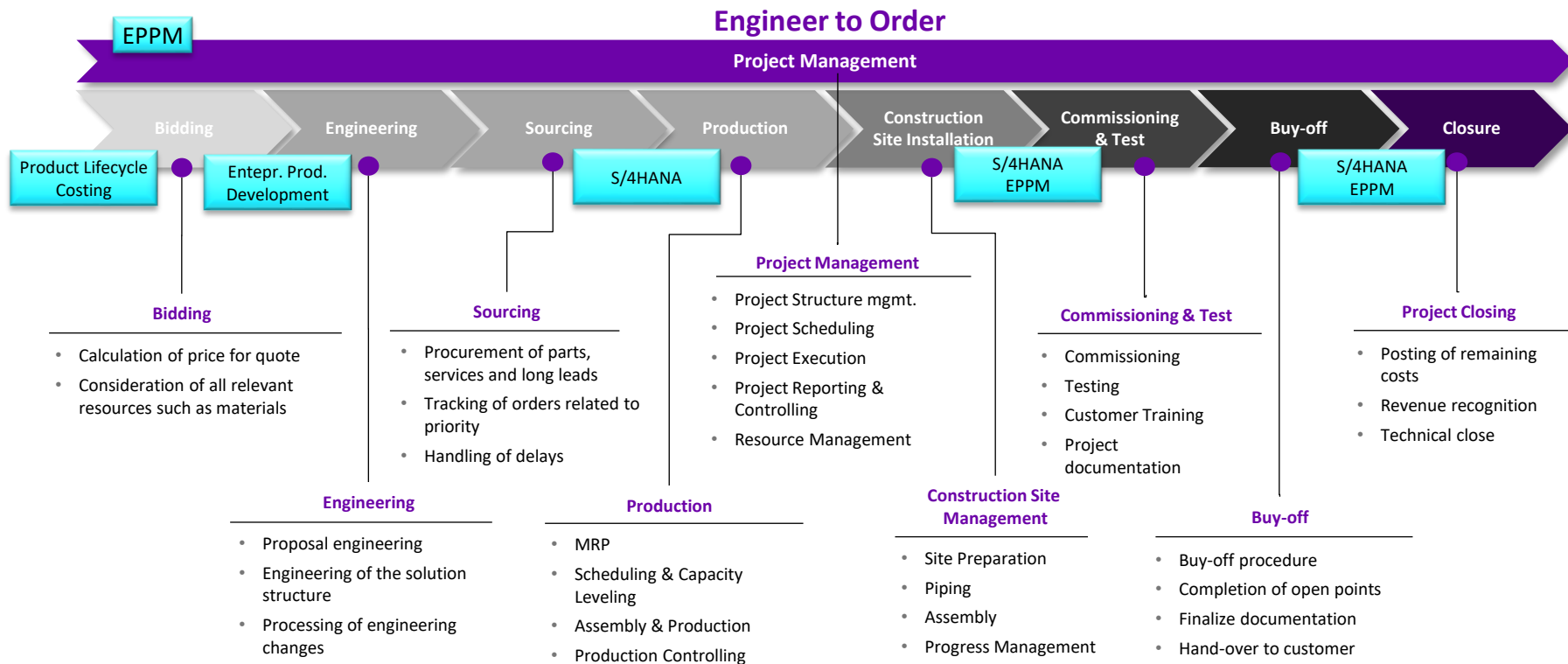
in-memory platform for all data

Roles:

- Project Manager
 - Project Team Member
 - Project Steering Committee Member
 - Project Portfolio Manager
 - Project Resource Manager
 - Program Manager
 - Commercial Project Manager
-
- Project Financial Controller
 - Project Logistics Controller

SAP S/4HANA EPPM and other solutions can support different stages in project businesses

SAP S/4HANA can support project business



Solution approach to provide comprehensive financial planning and traceability

Project financial planning

Project Planning						Traceability of Engineering Changes				
		Order	Current	External	Internal	Actuals				
		Order	Current	External	Internal	Actuals				
	Order Calculation	Current Calculation	External Changes	Internal Changes	Actuals		ECR 1	ECR 2	...	Total
Labour Costs										
Project Management Internal	20.860,00 €	25.150,00 €	4.290,00 €		6.260,00 €					
Engineering Internal	36.500,00 €	49.850,00 €	10.750,00 €	2.600,00 €	9.360,00 €					
...										
Material Costs										
Composites	54.600,00 €	64.380,00 €	9.240,00 €	540,00 €	12.530,00 €					
Electrical devices	93.380,00 €	104.690,00 €	7.660,00 €	3.650,00 €	10.670,00 €					
...										
General Costs										
Freight	41.460,00 €	66.750,00 €	25.290,00 €							
Travel	27.400,00 €	38.165,00 €	10.405,00 €	360,00 €	1.830,00 €					
...										
Total	274.200,00	348.985,00 €	67.635,00 €	7.150,00 €	40.650,00 €					

Internal Engineering Changes						External Engineering Changes				
		ECR 1	ECR 2	...	Total					
Labour Costs										
Project Management Internal										
Engineering Internal	Project Management Internal		850,00 €							
...	Engineering Internal	850,00 €	1.750,00 €	...	2.600,00 €					
Material Costs										
Composites										
Electrical devices	Composites	540,00 €			540,00 €					
...	Electrical devices	1.230,00 €	2.420,00 €		3.650,00 €					
General Costs										
Freight										
Travel	Freight		160,00 €							
...	Travel		360,00 €	...	360,00 €					
Total		2.620,00 €	5.540,00 €		7.150,00 €					

Conclusion

Financial transparency and traceability of engineering changes fosters better and more customer tailored solutions as well as higher profitability of project businesses.

Holistic overview of project relevant data with the Digital Project Twin Cockpit

Project data a glance

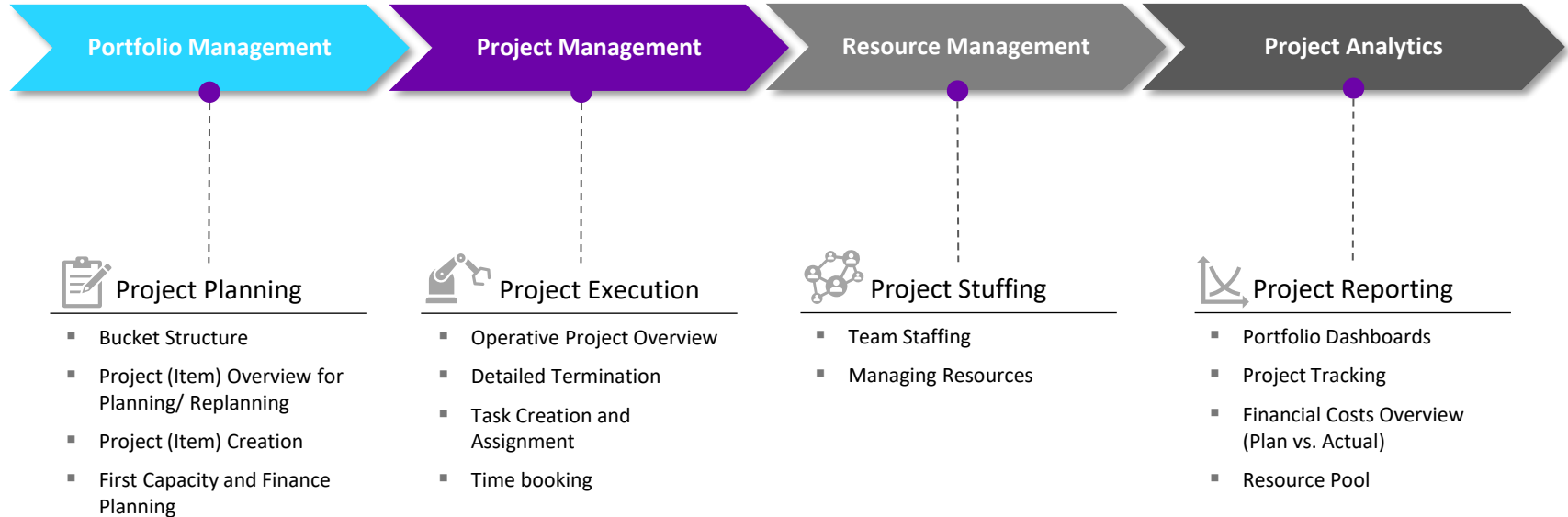




DEMO

Overview of selected businesses processes in the EPPM system demo

Business processes




SUMMARY

Take aways

Summary

- A Digital Project Twin supports transparency and efficient end-to-end project lifecycle management by connecting data based on integrated sensory.
- The BearingPoint Digital Project Twin Service offers a comprehensive framework to support the business transformation to a digitized company to be able to offer new business models.
- Various processes and features for Engineer to Order processes such as Multi-Project Management, Resource Management, Long Lead Item Management or Valuated Project Stock are covered by S/4HANA Enterprise Portfolio and Project Management (EPPM).
- SAP S/4HANA EPPM is fully integrated in the S/4HANA Digital Core and able to build the backbone of the BearingPoint Digital Project Twin.



S/4HANA Enterprise Portfolio and Project Management as basis of a Digital Project Twin helps to assure values by full transparency, to accelerate the project execution time by integrated planning and ad-hoc analysis as well as to mitigate risks by financial transparency and simulations.

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Q&A

Thank you!

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