



Trends and Concepts in the Software Industry Seminar: Consulting the Business

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In cooperation with SAP Innovation Center Potsdam, SAP SE

Trends and Concepts in the Software Industry

Generative AI in Enterprise Software

- Understand and improve business processes with AI assistance
 - Become familiar with real business use cases and how generative models can transform these use cases
 - Understand the barriers and enablers for AI adoption in enterprise use cases
- Get first experiences in consulting businesses
 - Gain insights into the industry by collaborating with SAP customers
 - Show benefits of data (and AI) supported decisions
 - Learn how to pitch in front of executives and convince them of your solutions

Trends and Concepts in the Software Industry

Our schedule:

Introduction	19.10.2023 (today ☺)	Introduction & information session for students
2-day kickoff workshop	16.11.2023 & 17.11.2023	<ul style="list-style-type: none">• Expert sessions• Hands-on exercises• Preparation for case studies
Group work & exercises	December 2023, January, February 2024	Case studies, you identify positive experiences and issues in your cases <ul style="list-style-type: none">• User and expert interviews• Desk research• Synthesis of results• Groups follow their own schedule guided by coaches
Intermediate presentation	February 2024 (CW 9)	Short presentation and discussion
Block week	11.-15.03.2024 (CW 11)	<ul style="list-style-type: none">• Presentation: case studies and insights, initial prototype ideas• Expert sessions: further technology aspects• Ideation and implementation of a prototype• Test / evaluation with case study contacts• Final presentations• 5 days
Documentation	31.03.2024+	<ul style="list-style-type: none">• Written report• Video or screencast to experience the student's prototype

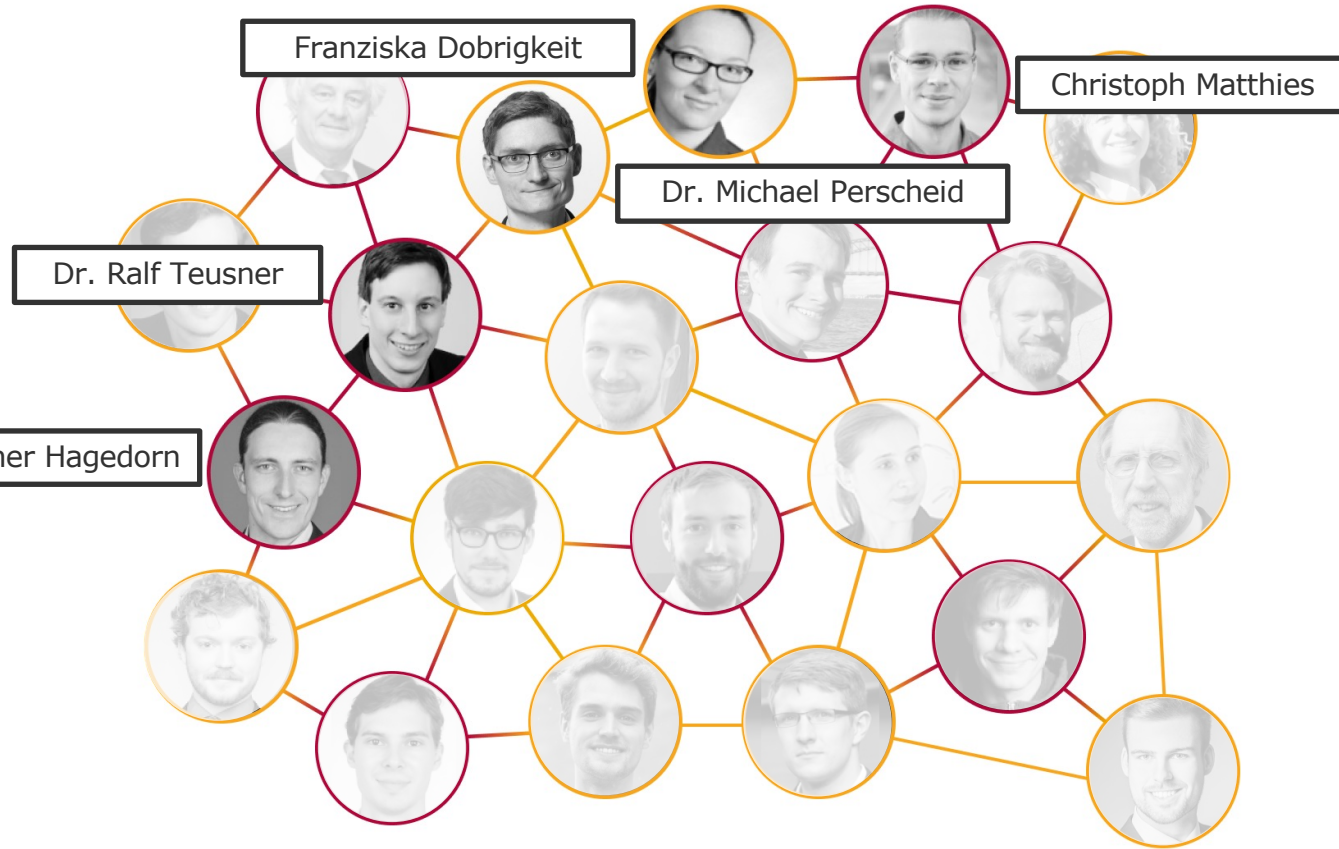
Trends and Concepts in the Software Industry

Students in all master's programs can earn ECTS

- 6 ECTS points (graded)
- Enrollment: 01.10. - 30.10.
- Modules:
 - IT-Systems Engineering MA
 - HPI-BPET-K Konzepte und Methoden
 - HPI-BPET-T Techniken und Werkzeuge
 - HPI-OSIS-K Konzepte und Methoden
 - HPI-OSIS-T Techniken und Werkzeuge
 - Data Engineering MA
 - HPI-DANA-K Konzepte und Methoden
 - HPI-DANA-T Techniken und Werkzeuge
 - HPI-DANA-S Spezialisierung
 - HPI-DASY-K Konzepte und Methoden
 - HPI-DASY-T Techniken und Werkzeuge
 - HPI-DASY-S Spezialisierung
 - Digital Health MA
 - HPI-SCAD-C Concepts and Methods
 - HPI-SCAD-T Technologies and Tools
 - HPI-SCAD-S Specialization
 - Cybersecurity MA
 - HPI-APAD-C Concepts and Methods
 - HPI-APAD-T Technologies and Tools
 - HPI-APAD-S Specialization
 - Software Systems Engineering MA
 - HPI-IDMG-K Konzepte und Methoden
 - HDI-IDMG-T Techniken und Werkzeuge
 - HPI-IDMG-S Spezialisierung
 - HPI-SSE-S Systems Foundations
 - HPI-SSYS-C Concepts and Methods
 - HPI-SSYS-T Technologies and Tools
 - HPI-SSYS-S Specialization
 - HPI-DSYS-C Concepts and Methods
 - HPI-DSYS-T Technologies and Tools
 - HPI-DSYS-S Specialization

Trends and Concepts in the Software Industry

Meet the teaching team

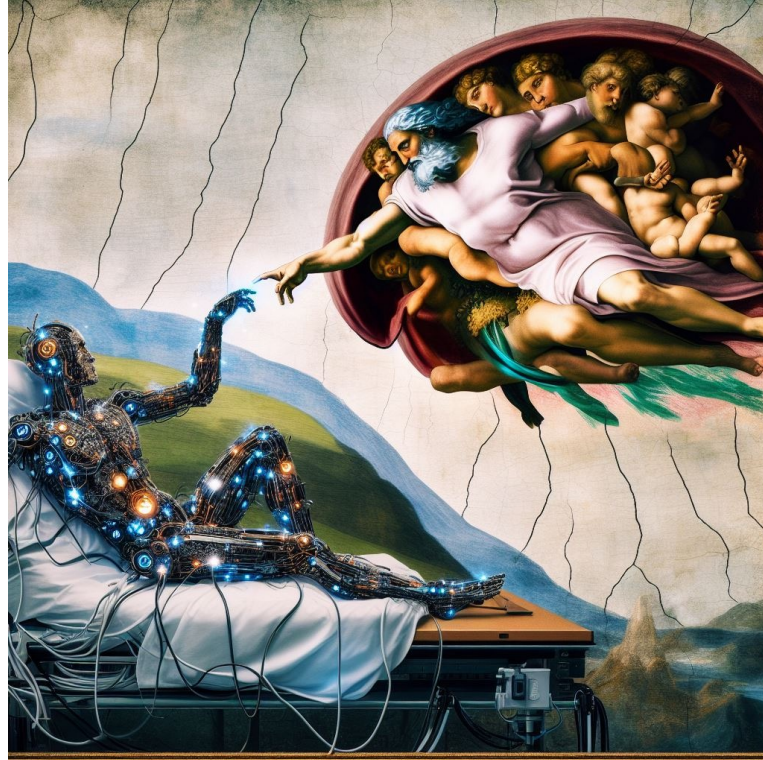


AI in Everyday Life

Expectations vs. reality

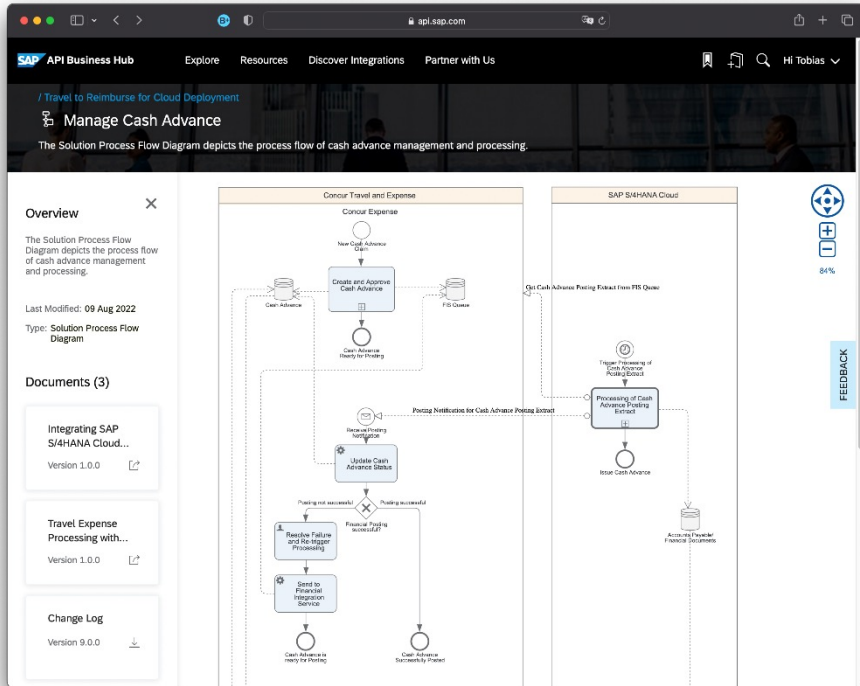
Applications of AI in ERPs

- Vision: Autonomous ERP
- Intermediate Steps:
 - “Intelligent” Chatbots
 - Decision Support
- Current Shortcomings
 - Hallucination
- Implications and Effects:
 - Liability
 - Ethics and morale
 - Perception of us as humans



Business Processes

Expectations vs. reality

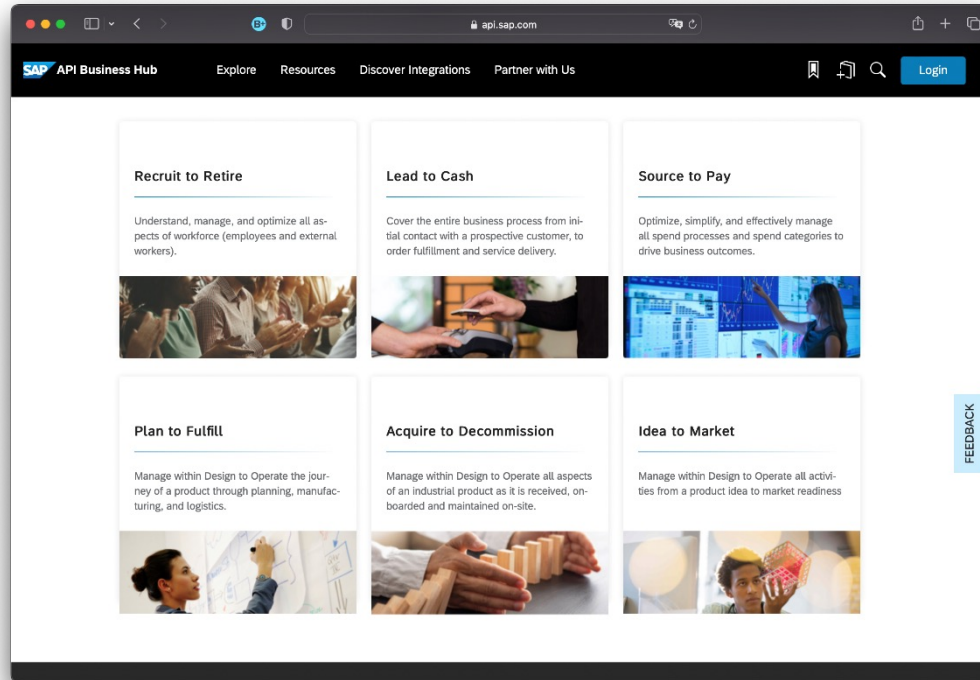


VS.



Business Processes

Best practices are available



<https://api.sap.com/> / <https://api.sap.com/allprocess>

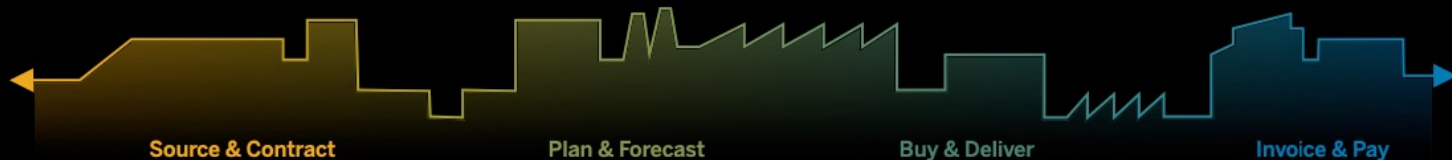
Lead to Cash

Manage all aspects of the customer experience, from the initial interaction to order fulfillment and service delivery. Drive and realize revenue along the customer journey.



Source to Pay

Manage all purchasing processes from strategic supplier selection to assuring compliance demands in operational procurement. Analyze and manage spend across business units and drive business value.



BUSINESS APPLICATIONS

SAP Ariba


SAP S/4HANA

Partner Solutions

Third Party Solutions

Design to Operate

Create a digital mirror of your entire supply chain – from design to planning, manufacturing, logistics and ongoing maintenance. Embed intelligence and ensure your customers are central to each and every phase of your business.



D2O Subprocess:
Plan to Fulfill

D2O Subprocess:
Acquire to Decommission

Design

Plan

Manufacture

Deliver

Operate

D2O Subprocess:
Idea to Market

BUSINESS APPLICATIONS

SAP S/4HANA

SAP Intelligent Product Design

SAP Integrated Business Planning

SAP Digital Manufacturing Cloud

SAP Global Track and Trace

SAP Intelligent Asset Management

SAP 3D Visual Enterprise

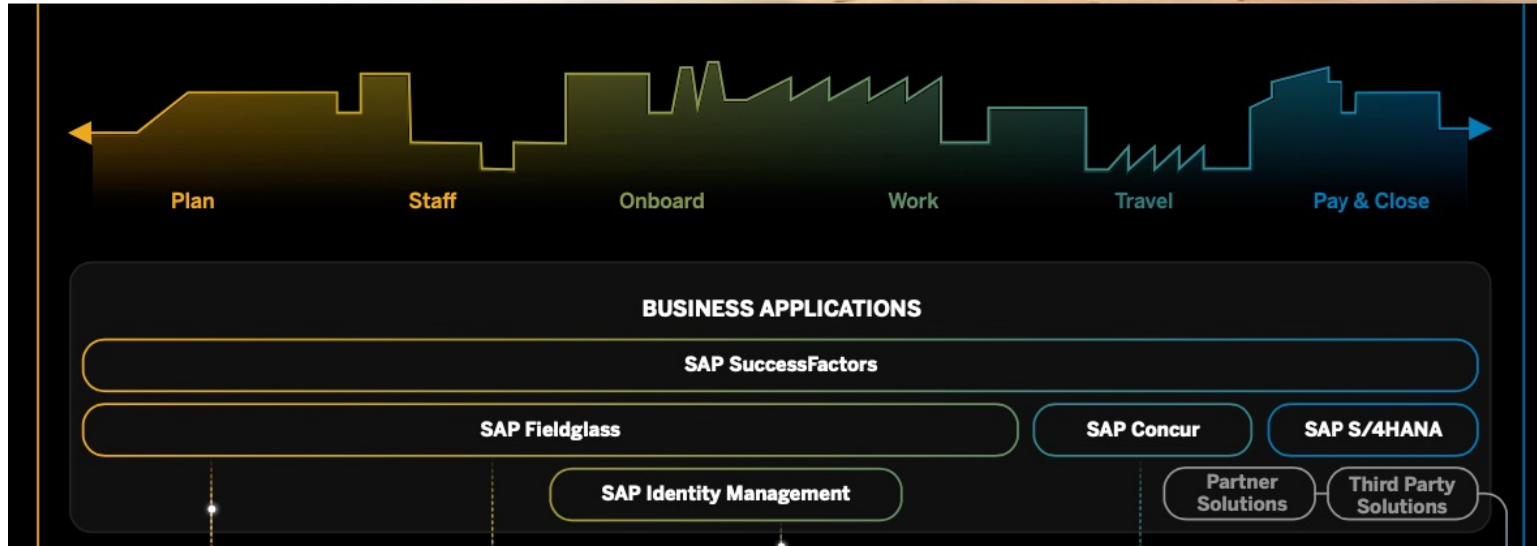
SAP Engineering Control Center

Partner Solutions

Third Party Solutions

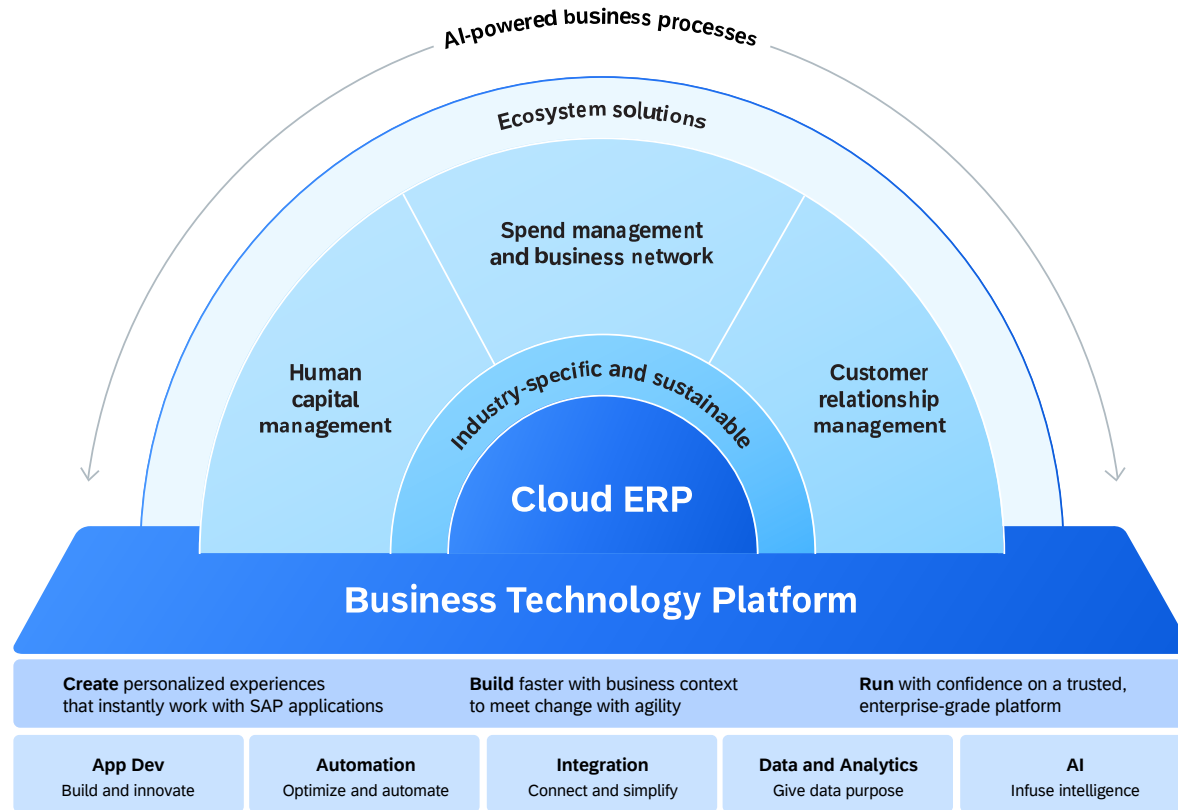
Recruit to Retire

Understand, manage and optimize all aspects of your workforce (employees and external workers) in line with business objectives and with clear financial impact.



GenAI

SAP Portfolio and Approach



Market Potential

As seen by SAP

Generative AI could add
\$2.6 to \$4.4 trillion
incremental value
annually to the global
Economy

Existing productivity value from
previous generation of AI and
analytics

AI represents a huge value creation potential across industries, many organizations are actively looking into expanding their adoption

Widespread adoption, despite early days

33%

companies globally are using gen AI regularly in at least one business function

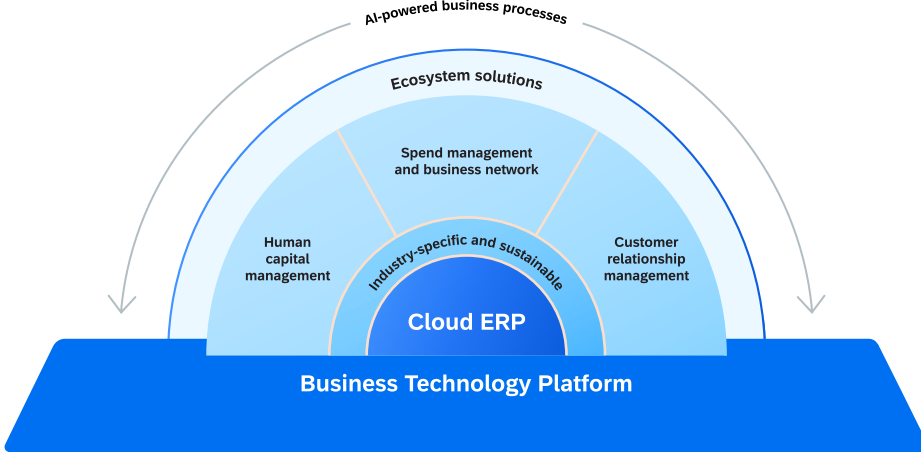
40%

organizations will increase their investment in AI overall because of advances in gen AI

60%

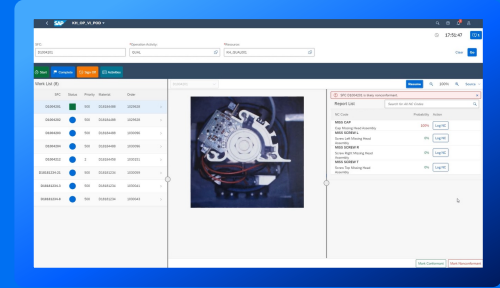
organizations with AI adoption are using gen AI

Embedding AI into core business processes

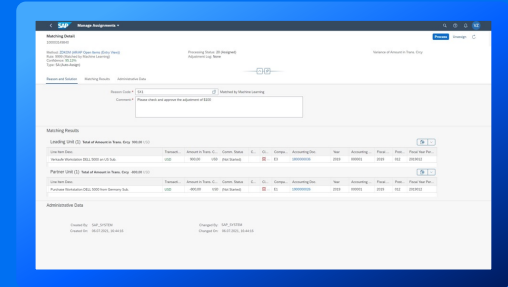


AI SHWO CASES

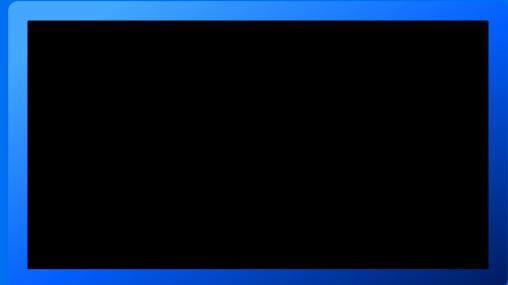
Automate visual inspections on the shopfloor



Close your books faster with fewer errors



Expedite freight verification and documentation



Detailed value proposition

Business Processes and GenAI

Where to start?

- Where do you see gaps in current processes?
- Given the gaps between visions, expectations, and reality:
 - Where can AI and huge amounts of data support suboptimal processes?
 - Where can process definitions and boundaries circumvent shortcomings from generative AI?
 - What completely new business models could arise?



Trends and Concepts in the Software Industry

Learn about generative AI and SAP technology



- English, free courses on **deeplearning.ai**
- Especially the short courses give a quick introduction into recent topics such as GANs, LangChain etc.
- [Link](#)



- German, introduction to ChatGPT and its effects on society by HPI alumni Johannes Hötter and Christian Warmuth
- [Link](#)



- English, background knowledge about SAP BTP and used technologies by experts from SAP
- [Link](#)

Conclusion

Conduct case studies with real customers

- Act as consultants and collaborate with SAP customers
- Conduct interviews with selected contact persons in the companies in order to identify challenges that can be solved
 - How does a chosen business process look like?
 - How are customers currently optimizing their business processes?
 - How can AI help in these processes?
 - What are pitfalls when introducing AI to business?
 - ...

Conclusion

Participants will get first experiences in consulting

This means:

- Become familiar with real business challenges and how generative AI solutions can help to overcome these challenges
- Understand the barriers and enablers for AI in enterprise use cases
- Learn how to pitch in front of executives and convince them of your solutions
- Improve teamwork, self-organization, presentation and pitch skills to executives (Among others **Christian Klein (CEO SAP)** and **Philipp Herzig (SVP, Head of Cross Product Engineering & Experience)**)

Conclusion

Next steps

- Register for course at HPI Studienreferat
- Team assignment on 30th October
- Please submit team preferences if desired via mail to ralf.teusner@hpi.de

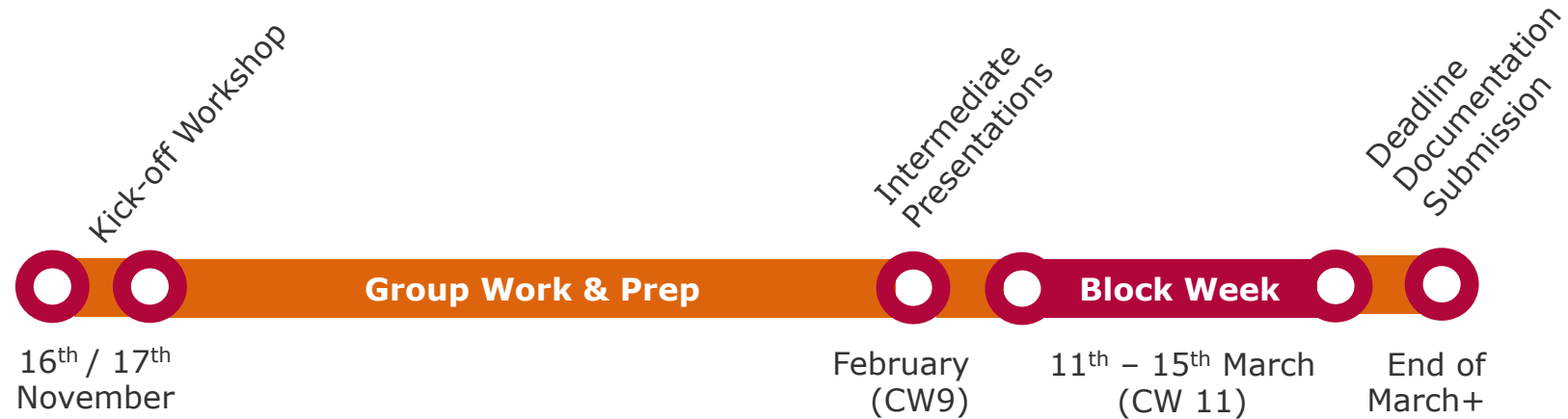
Conclusion

Next steps

- After being assigned to your team, your first task is:
Prepare a 20 minute spotlight talk (+10 min discussion) on one of the following topics (we will assign you):
 - AI Architectures – Overview, Transformers, and GANs
 - LangChain and the Role of VectorDBs
 - TensorFlow
 - State of "Business AIs"

Conclusion

Our schedule and milestones:



Contacts

Feel free to reach out!

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- Michael Perscheid
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Please register for the Moodle course

- For slides, announcements, etc.
- <https://moodle.hpi.de/course/view.php?id=677>