

Human and AI Collaboration in the Era of Vibe Coding

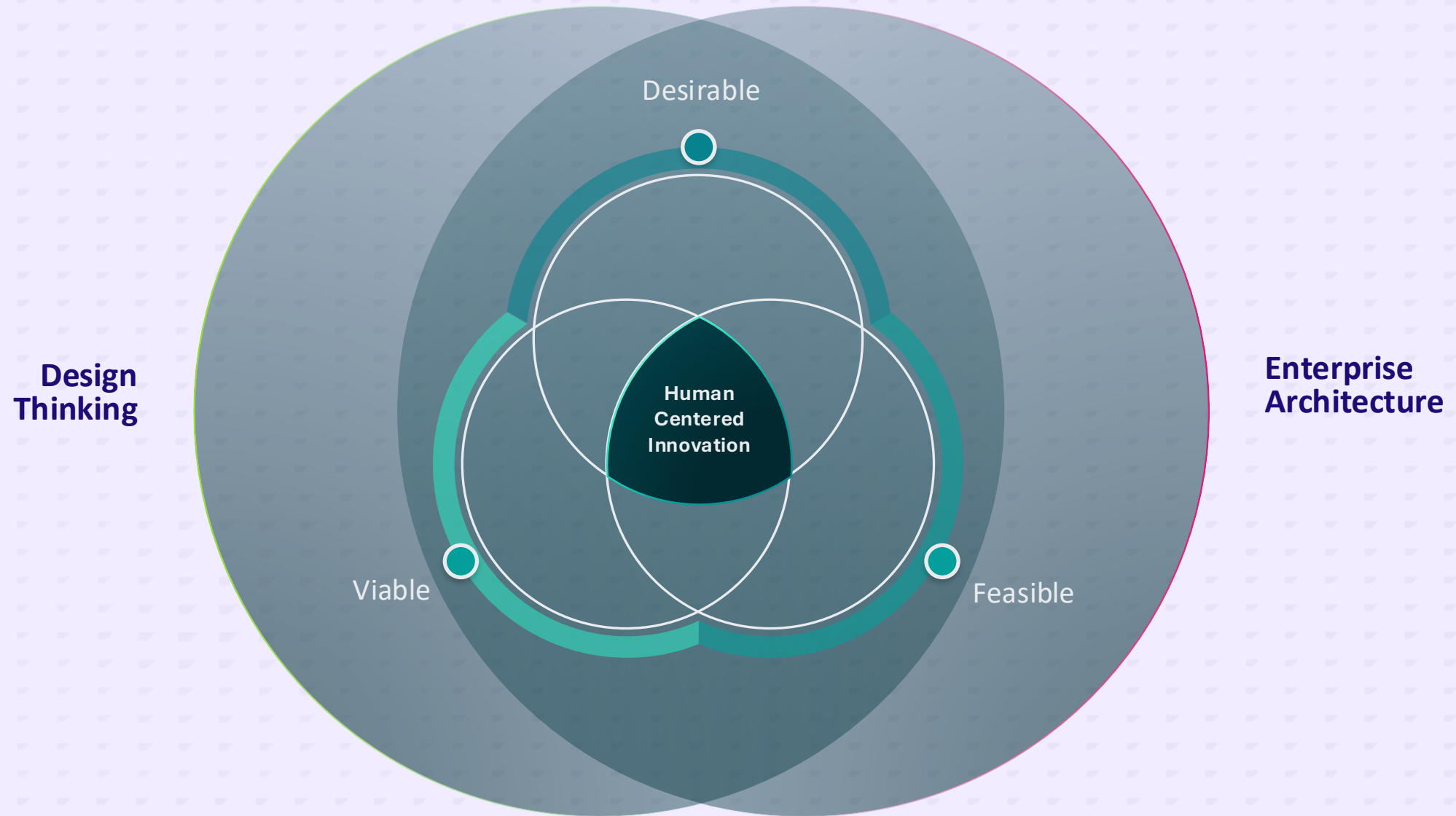
SBN Conference

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Daniel Boer Johanessen HEMIT

October 2026



Our Approach to Human-Centered Innovation



1

A hope for a brighter future







“AI Agents will
become the **primary**
way we interact with
computers in the
future”

Satya Nadella,
CEO Microsoft



2

Today's and Future Challenges





AI that is not properly directed does not do nothing. It does the wrong things, confidently and at speed.

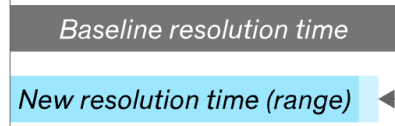
Pascal Bornet,
The Human-Agent Orchestrator

Getting the most out of agentic technology

Agents hold the key to breaking through – if processes are **reinvented, not just optimized.**

(McKinsey & Company
Seizing the agentic AI advantage)

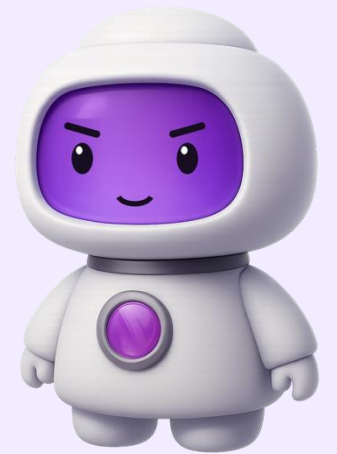
Example: Call center performance comparison

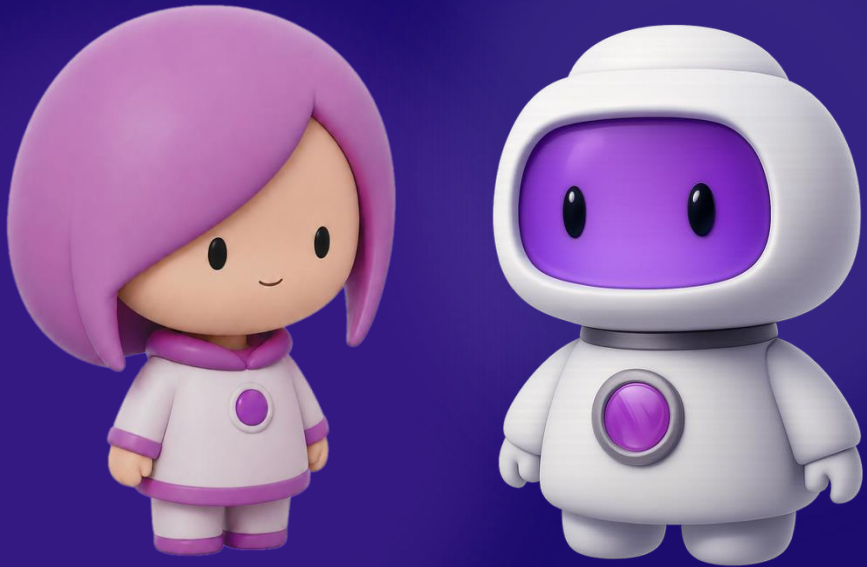
	Gen AI-enabled	Agent-enabled (optimized)	Agent-enabled (reinvented)
Description	Human manages every step of the workflow, assisted by gen AI tools to help retrieve knowledge-based articles, summarize ticket history, and draft responses	AI agent automates discrete tasks within existing workflow, such as ticket classification, suggestion of likely root causes, and resolution of frequent, low-complexity issues	Process is redesigned around agent autonomy: AI agents proactively detect incidents, diagnose issues, and initiate resolutions automatically
Estimated impact	 5–10% average reduction in resolution time	 20–40% average reduction in resolution time	 60–90% average reduction in resolution time 80% of level 1 incidents resolved automatically



3

Ensure a focus on AI strengths to overcome human limitations





Imagine you can partner with
digital coworkers to ease your
manual tasks.
**How should humans and AI
collaborate to get the best
outcomes?**

Strengths and Limitations of Humans and AI – Card Set



Human + AI Co-lab

A discussion deck to design work for the autonomous era with Humans and AI at their best.

HUMAN STRENGTH 01



Empathy & emotional intelligence

Humans feel. We read the room, sense when someone's upset, and respond with actual care — not just the right words. Trust, sensitive conversations, real connection: this is the bit AI can mimic but not mean.

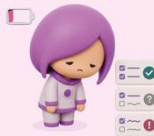
HUMAN STRENGTH 02



Creativity & Radical Innovation

Humans connect dots across unrelated domains, generating truly novel concepts. We leap from a jazz concert to a product idea, or pull from a memory fifteen years old to solve today's problem. Not just recombining what exists — imagining what doesn't yet.

HUMAN LIMITATION 02



Fatigue & Inconsistency

We have bad days. AI doesn't. Tiredness, stress, distraction all affect output. The tenth decision of the day is rarely as sharp as the first, and repetitive work done by tired humans is a recipe for errors.

HUMAN LIMITATION 03



Cognitive Biases

Our brains take shortcuts, and they aren't always right. We see what we expect to see, favor information that confirms what we already think, and get swayed by framing. These biases are universal, mostly invisible, and worst under time pressure.

AI STRENGTH 01



Speed & Scale

AI doesn't slow down. What takes a team a week — scanning thousands of documents, drafting every variant, processing massive datasets — AI does in seconds, in parallel, without coffee or complaint.

AI STRENGTH 02



Pattern Recognition, at Scale

AI spots things we'd miss. Hidden trends, unusual outliers, connections across millions of data points. AI is extraordinarily good at finding signal in noise. More data doesn't overwhelm AI — it makes it more useful.

AI LIMITATION 04



No Moral Compass or Accountability

AI can't weigh right vs. wrong. No values, no conscience, no intent — and no one to hold responsible. It will execute instructions even if the outcome is harmful, because it doesn't know the difference. Any decision with real ethical stakes needs a human in the loop.

AI LIMITATION 06



Executes Goals, Not Intentions

Tell AI to "fix the bugs" and it might delete the code. Tell it to "clean up the files" and it might wipe the project. AI pursues the goal you gave it, literally, directly, without stopping to ask "wait, should I actually do this?" It optimizes for the instruction. Not for what you meant.

4

**Which technology should we
choose to automate?**



Agents versus other technologies



Robot



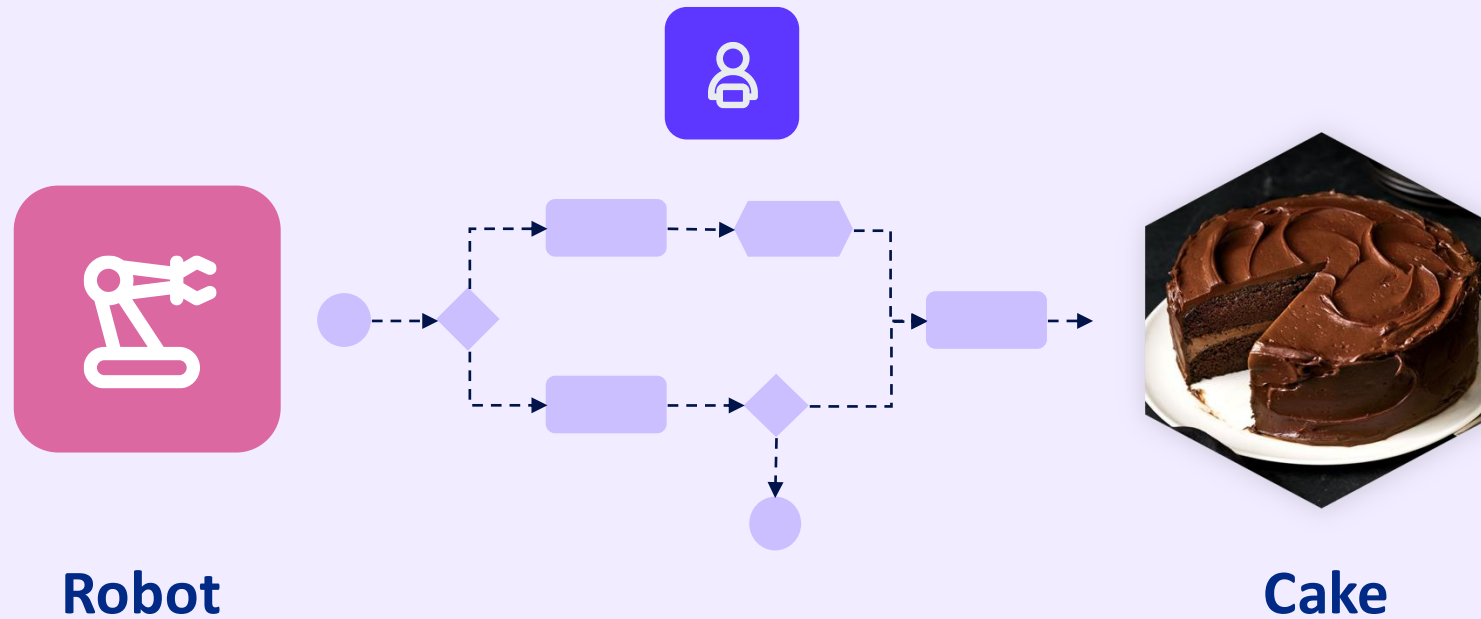
Chatbot



Agent

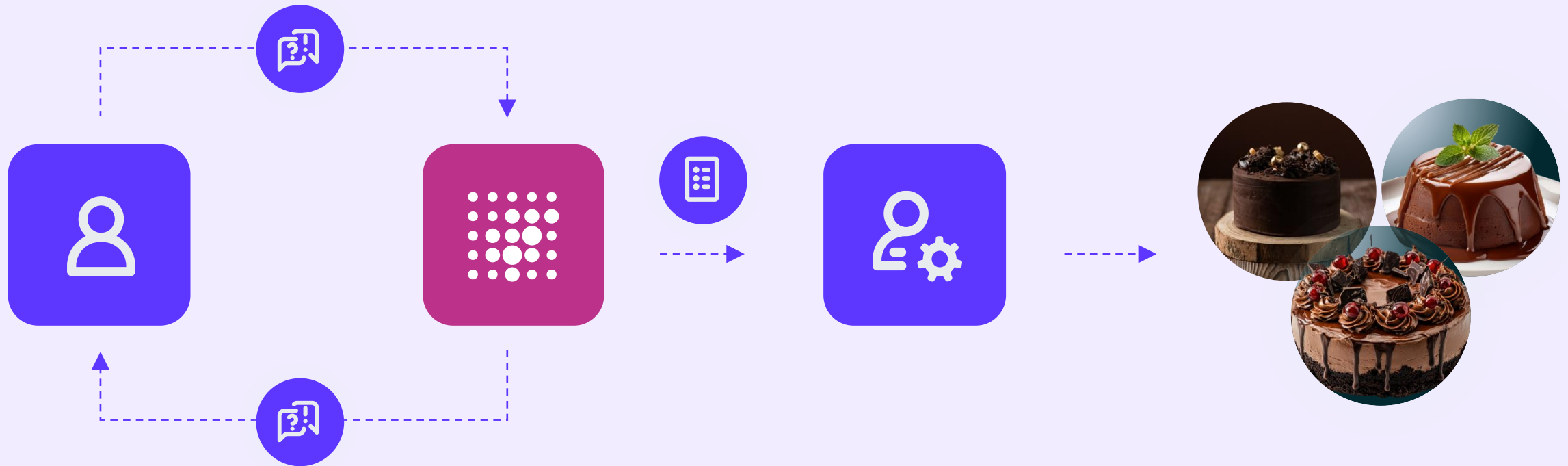
How would a **robot**, a genAI **chatbot** and an AI **agent** help to bake a chocolate cake?

Agents versus other technologies



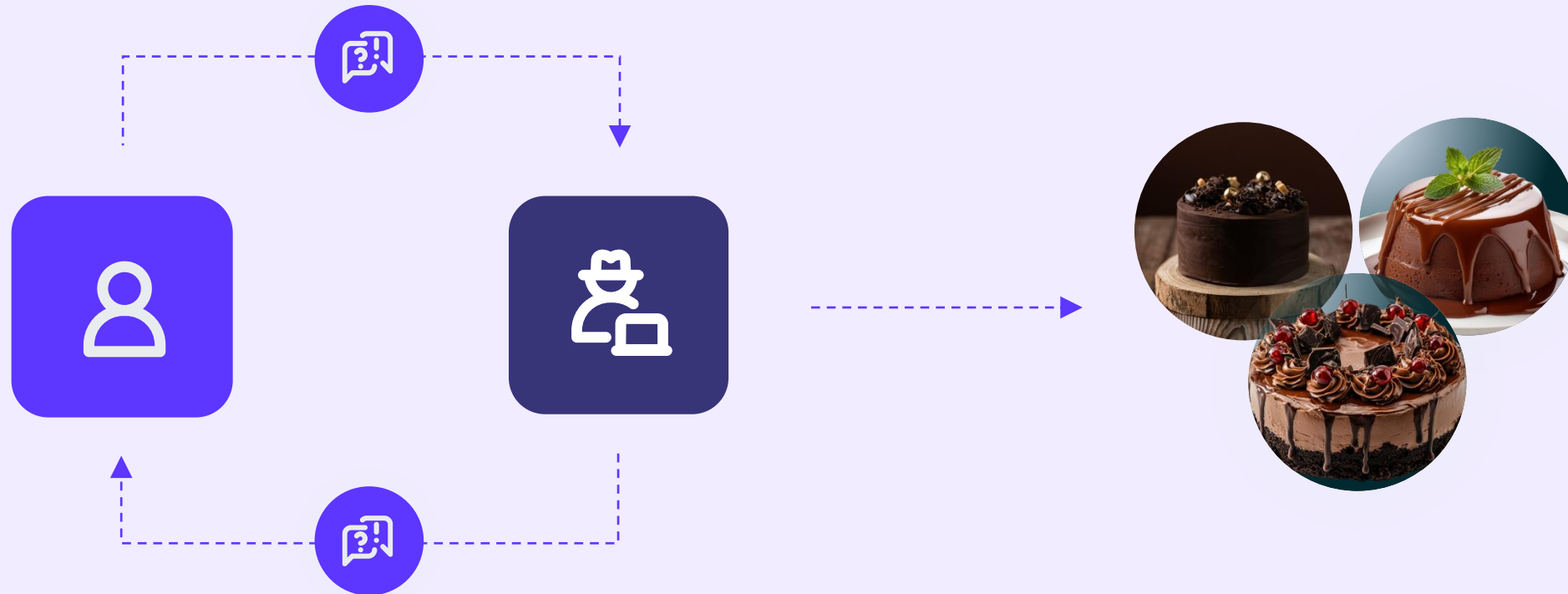
The **robot** follows exactly the same steps every time. No thinking needed. **Always the same** cake.

Agents versus other technologies



The **genAI chatbot suggests the best recipe** based on ingredients you have, but **you bake the cake**.

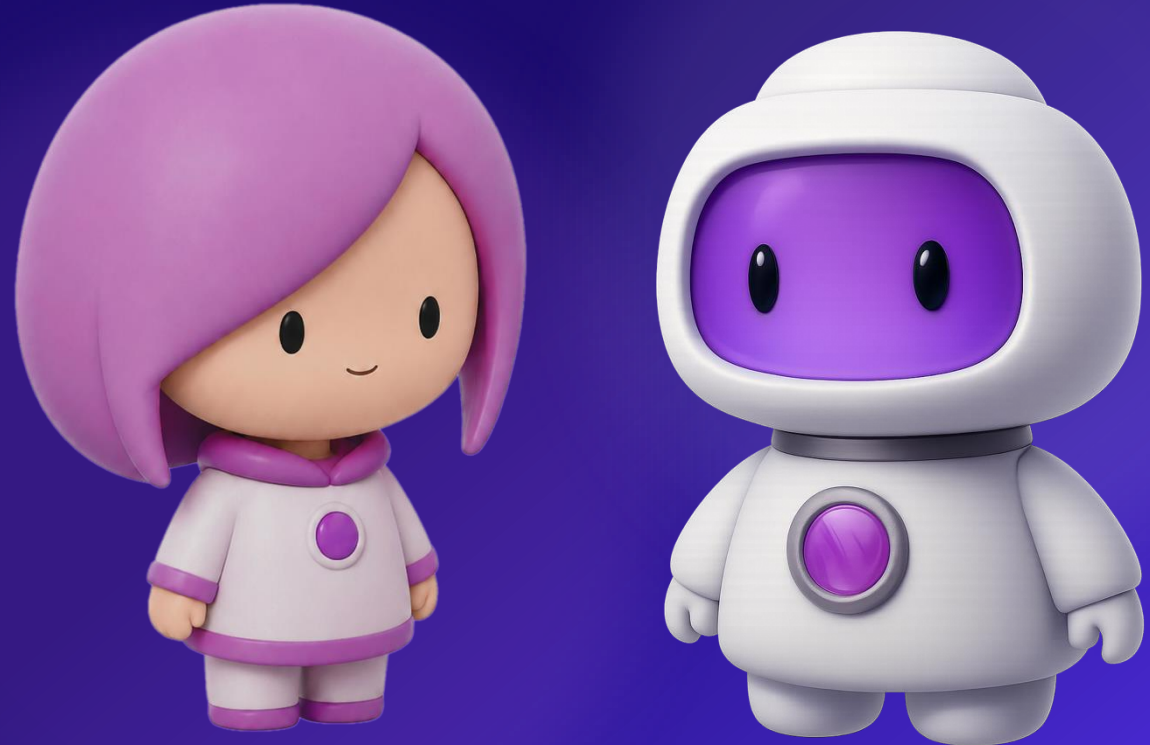
Agents versus other technologies



The **agent** does **everything**. Gets the ingredients, bakes, adapts and learns from experiences.

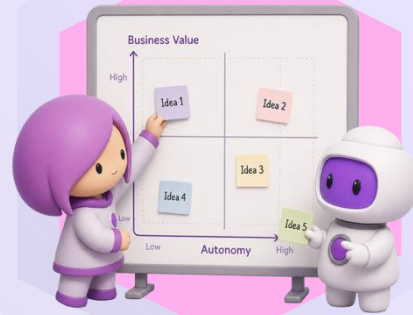
Human+AI Co-lab

Reinvent work with
Humans and AI at their best.



Tobias Gollwitzer
October 2026

A Human-Centered Approach to Design Human-AI Systems



1

Human+AI Co-lab
Explore Workshop
AI Scenario Identification



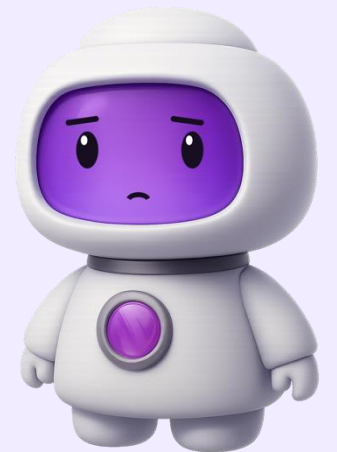
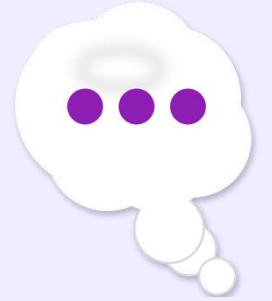
2

Human+AI Co-lab
Design Workshop
AI Scenario Definition

5

What do we need to automate and why?

Ideate and select scenarios that benefit from agentic technology.



Human+AI Co-lab

Explore Workshop

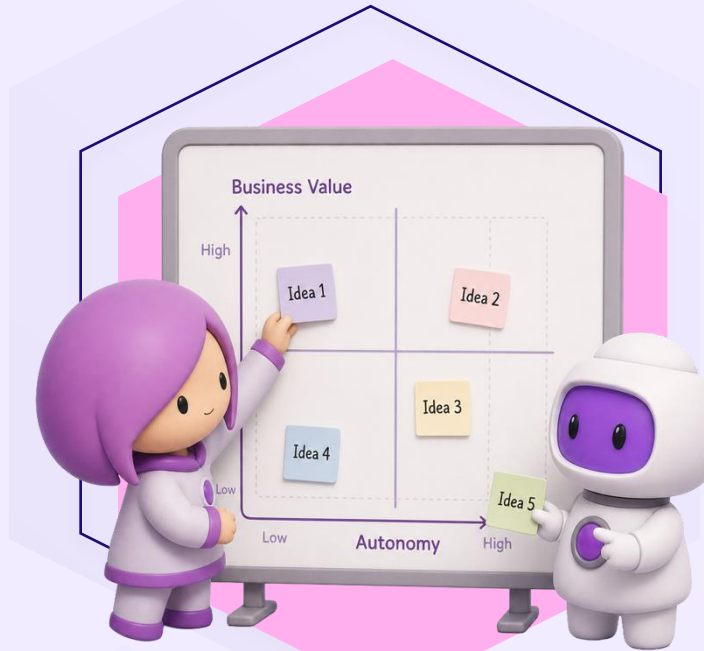
Turn business challenges into high-value AI opportunities.

Duration:

2h – 3h on-site or virtual

Goals:

- Identify high value autonomous scenarios for one or multiple domains in your company.
- Identify which use cases to start with by creating a potential realization roadmap, based on readiness and target value.



Who

should participate?

Strategic decision makers from different business departments, IT experts (1 : 1 or 1 : many).

Why

should you care?

Agentic transformation requires processes with a clear value. This workshop guides participants to spot high-value automation opportunities, and prioritize where to start.

What

is the outcome?

A prioritized roadmap of high-value autonomous scenarios, with a clear starting point.

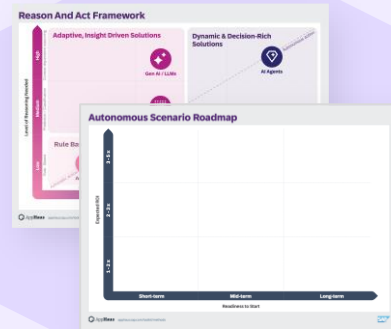
Human+AI Co-lab **Explore** Workshop

Turn business challenges into high-value AI opportunities.



1

Ideate
scenarios
to improve



2

Prioritize
use case ideas
and select the top
ones.



3

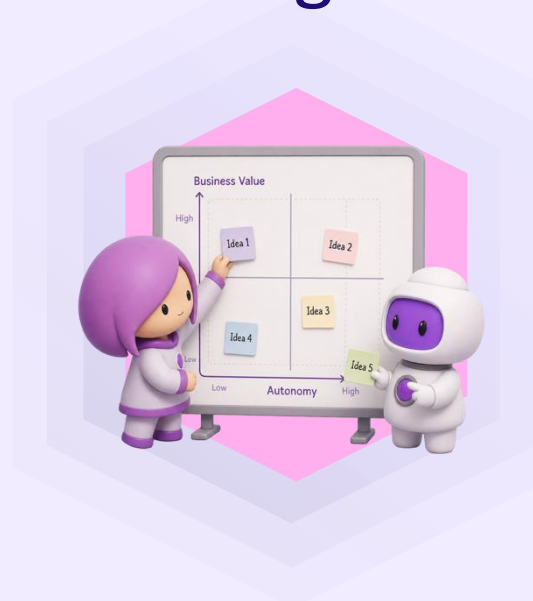
Verify
the novelty of the
use case ideas



4

Share-out
and review

A Human-Centered Approach to Design Human-AI Systems



1

Human+AI Co-lab
Explore Workshop

Autonomous Scenario
Identification



2

Human+AI Co-lab
Design Workshop

Autonomous Scenario
Definition

6

How should the new solution work?

What should AI do and what should Humans do?



Human+AI Co-lab Design Workshop

Turn a manual process into an autonomous solution powered by Human-AI collaboration.

Duration:

3h – 5h on-site or virtual

Goals:

- Gain common understanding of where a selected process or scenario needs AI.
- Create an autonomous solution blueprint, with clear boundaries for what AI can decide alone and where humans must stay in control.
- Document the requirements as deliverables to take home: full solution description as an md file, product website showcasing the value of the potential solution, click-through prototype.



Who

should participate?

Business process experts, IT experts (1 : 1 or 1 : many).

Why

should you care?

Autonomous systems fail when teams leave human judgment undefined. This workshop turns AI autonomy into a concrete design: what AI owns, where humans stay in the loop, and what remains human-only.

What

is the outcome?

An implementation-ready solution blueprint, with human, and shared steps mapped out, plus a value-showcasing website, and a click-through prototype to validate early.

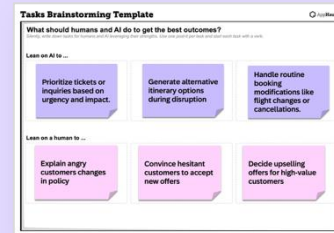
Human+AI Co-Lab Workshop Structure

A human-centered approach to design autonomous solutions



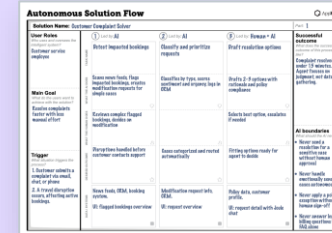
1

Understand
the current situation



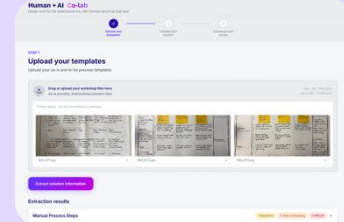
2

Identify
tasks for the autonomous
system



3

Define
your autonomous solution



4

Validate
and download

Human

Human + AI

7

What do our customers say?



Hemit er ...

Midt-Norges **største** IKT-miljø

Arkitektur | Utvikling | Integrasjon | Prosjektledelse | Innovasjon | Support | Sikkerhet | Drift | Forvaltning



460

ANSATTE

IKT for liv og helse

Hemit håndterer ...



102 000

henvendelser til
Hemithjelp



1 200

applikasjoner



420

fysiske servere



4 600

virtuelle
servere



27 000

brukere



21 000

arbeidsstasjoner

Human+AI Co-Lab in action: Invoice processing

Explore Workshop: ideate, prioritize and selected the top use case

Design Workshop: mapped the to-be process flow with AI and defined which tasks to automate and the level of human oversight.

Result: requirements for top use case plus three downloadable deliverables generated — shown below.

AI generated posting of NPO (non purchase order)

Business Domain: Accounts Payable — Non-Purchase-Order Invoice Processing Target Users: AP Processor (Account Team), Requestor of goods, Invoice Approver Date: 2026-09-23

Business Intent

We want to build an AI-assisted non-purchase-order invoice processing and posting solution for accounts payable teams managing high-volume inbound invoices in SAP VIM and S/4HANA. Currently, AP processors manually analyse up to 600 invoices per day at 2-3 minutes each, guessing requestors from incomplete vendor data, filling missing fields by hand, and checking GL accounts against tax rules — a process plagued by repetitive errors, incorrect GL coding, and missing PO linkages. The solution targets a reduction of manual invoice analysis time from a full day to under 30 minutes per batch by automating fault detection, field pre-filling, requestor routing, and GL/WBS suggestion, while keeping humans accountable for final coding selection, approval, and vendor engagement.

1. Key Features / Capabilities

- Automatically classifies incoming EDI and scanned invoices as faulty or processable using structured field scoring.
- Pre-fills missing invoice fields from historical S/4HANA invoice data and active VIM business rules, displaying the source for each fill.
- Suggests the correct requestor ranked by confidence score, constrained to the active chart of authority and the invoice's own organisation.
- Blank GL account, WBS element, and cost centre suggestions by confidence score and validates active status before presenting to the Requestor.
- Flags quantity mismatches between invoice and purchase order and suggests PO linkage when absent from the invoice.
- Routes rejected invoices back to the prior processor automatically, carrying a structured rejection reason for targeted correction.
- Aggregates vendor error patterns and generates a prioritised, human-readable improvement report combining ML pattern detection and generative summarisation.
- Supports AP Processor review of low-confidence fields and Requestor selection of final GL/WBS coding with full audit trail per invoice.

2. Users / Roles

Role	Access Level	Primary Actions
AP Processor	Full access to VIM inbox, invoice object level, and vendor error reports within their assigned	Reviews faulty invoice flags, corrects fields AI cannot fill, reviews low-confidence requestor suggestions, validates GL coding, and sets on

Solution Description (md) including business intent

Transform Invoice Processing in Minutes

Automate fault detection, field pre-filling, and GL coding for high-volume non-purchase order invoices. Keep humans accountable for final approval and vendor engagement.

90%

Time Reduction

From 1.2 day to under 30 minutes per batch

600+

Invoices Daily

Processed and routed automatically

8%

Error Rate Reduction

From GL coding and requestor misselection

The Hidden Cost of Manual Invoice Analysis

Manual Invoice Analysis

Processing 600 invoices daily at 2-3 minutes each with incomplete vendor data and missing fields.

AP processors guess GL accounts based on tax rules without confidence scoring or historical context.

Incorrect GL Coding

AP processors guess GL accounts based on tax rules without confidence scoring or historical context.

Requestor Identification

Finding the correct requestor requires vendor investigation and manual cross-referencing against the chart of authority.

Field Pre-Fill Gaps

Many invoices arrive with missing cost centres, invoice number, or date requiring manual lookup and correction.

Recurring Vendor Errors

No systematic view of which vendors submit faulty invoices or what errors recur most frequently.

Approval Rework

Invoices are rejected due to missing PO links or wrong cost centres, forcing processors back to earlier steps.

Product Website including process flow

NPO Invoice Processing Agent

AP Processor reviewing a flagged inbound vendor invoice with missing fields and low-confidence requestor routing

I have a flagged invoice from Hartmann Facility Services in my VIM queue — VIM-INV-2025-084312. Can you analyse it, pre-fill what's missing, and get it ready for requestor routing?

Reasoning

- Invoice VIM-INV-2025-084312 was classified as FAULTY by the Invoice Fault Classifier with score 0.61 — below the 0.75 auto-process threshold.
- Audit log entry already written at Step 1.
- Delegating to Invoice Field Analysts and FIM Agent for full field analysis and pre-fill.
- Will then trigger Requestor Routing Classifier and GL/WBS Coding Classifier in sequence.
- Confidence-threshold branching will determine whether to auto-route or surface candidates to AP Processor.

JSON

```
vim.getInvoiceObject
```

Invoice object retrieved from VIM inbox. Real score 0.61 confirmed. Fields missing: Cost Centre, WBS Element, GL Account, Requestor, PO Reference. Tax code and payment terms present but unvalidated.

Field	Value
Invoice ID	VIM-INV-2025-084312
Vendor	Hartmann Facility Services GmbH (V-00472)
Amount	EUR 18,450.00
Invoice Date	2025-07-08
PO Reference	MISSING
Cost Centre	MISSING
WBS Element	MISSING
GL Account	MISSING
Requestor	MISSING
Tax Code	V2 (unvalidated)
Fault Score	0.61 — below 0.75 threshold

Invoice Processing and FIM Agent

Analyse invoice VIM-INV-2025-084312 for company code DE10, vendor V-00472. Pre-fill all recoverable missing fields using historical S/4HANA invoice tables and active VIM business rules. Display source reference for every filled value. Log vendor/invoice correlation entry.

Reasoning

- Querying S/4HANA historical invoice tables for vendor V-00472 in company code DE10.

Click-through Prototype simulation in Joule Work

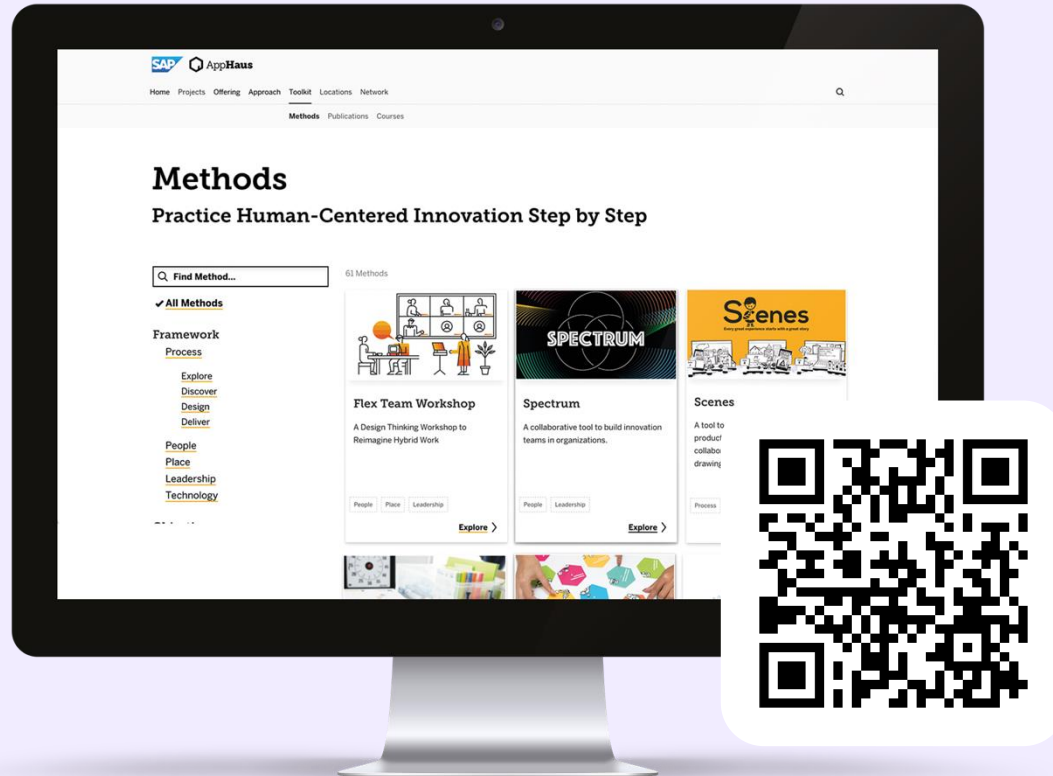
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**Where to find more
information?**



Innovation Toolkit for AI Resources



- Business AI Explore Workshop
- Business AI Design Workshop
- Joule Agent Discovery Workshop Templates and material
- Joule Agent Design Workshop Templates and material

Contact

karen.detken@sap.com

Scan to open templates & material:



Explore Workshop



Design Workshop



Joule Discovery



Joule Design

Thank you!



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