Becoming an AI-Enabled Company

How to Start, Scale & Succeed with AI

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ARCTUR

- 35+ years in IT
- 15+ years in HPC
- Own HPC & DC
- Own development team
- Own HPC and AI team
- Strong presence in commercial and research projects

Starting with AI

Recent AI Activities

Testing HW, benchmarking, testing workloads and production cases

GPU compute for AI (inference) – stability, compatibility, performance testing

Model support and optimisations for MAC GPUs

HPC centre upgrade and production GPU cluster deployment

- NOVA FOTKA DCJA!

About MAC GPU

64 GB of HBM

340 TFLOPS FP16

PCIe5 interface

400W TDP, air-cooling

Optimised for AI inference workloads

Video decoding and encoding

The Reality Check

AI Is Already Here. Is Your Business?

0%

2025

2.5H

saved per employee per day on average through AI automation

$1.85T

projected global AI market by 2030 — growing 37% annually

⚠ Companies that delay AI adoption risk a compounding disadvantage: early movers are building irreversible data and efficiency leads right now.

Definition

What "AI-Enabled" Actually Means

❌ What it is NOT

- → Having a ChatGPT subscription for a few people
- → Running a one-off PoC that sits in a drawer
- → Buying AI-branded software without strategy
- → Expecting instant ROI with zero process change

✅ What it IS

- → AI embedded in core workflows & decisions
- → Data infrastructure that feeds models continuously
- → People who know *how* and *when* to use AI
- → Governance: rules, ownership, accountability

AI transformation is not tool adoption. It is a leadership decision about how your organisation makes decisions, allocates resources, and serves customers — with AI as infrastructure.

Our Journey

How we did it at Arctur

Foundation First

30+ years HPC infrastructure built the data-ready backbone. Arctur-2 cluster with NVIDIA GPUs, NVMe storage, InfiniBand networking — compute that actually runs models.

Domain-Specific AI

Not generic tools — purpose-built solutions. FLOWS (tourist flow prediction), CLASSICA (cancer classification AI), LLMs4EU (tourism domain LLM). Real problems, real data.

Ecosystems & Funding

EUROCC2, Fortissimo+, FFplus EU projects. Arctur as NCC Slovenia — sharing HPC & AI capabilities with SMEs. You don't have to build alone.

Key lesson: We started with infrastructure, found real use cases in our own industry (tourism, manufacturing), proved value with EU-funded R&D, then scaled to help others.

The Framework

Your 4-Phase AI Adoption Roadmap

01
Assess

Audit your data, processes & pain points. Where does manual work slow you down? Where does data go to die?

⏱ Weeks1–4

02
Pilot

Choose 1–2 high-value, low-risk use cases. Use off-the-shelf tools. Prove value before scaling: fail fast, learn cheap.

⏱ Months 2–4

03
Scale

Embed AI in workflows, train staff, build data pipelines. Shift from PoC to production. Define KPIs & measure ROI.

⏱ Months 4–12

04
Govern

Establish AI policies, ethical guidelines, compliance processes. Build an AI literacy culture across all levels.

⏱ Ongoing

The biggest mistake: skipping directly to step 3.
Pilot → **learn** → **scale** is the only path that sticks.

Practical Starting Points

Quick-Win AI Use Cases Across Industries

Tourism & Hospitality

- AI chatbots for 24/7 guest queries
- Dynamic pricing & demand forecasting
- Visitor flow prediction (like FLOWS)
- Personalised itinerary generation

Manufacturing

- Predictive maintenance → -30% downtime
- Quality defect detection via vision AI
- Energy optimisation algorithms
- Supply chain demand prediction

Retail & Services

- Customer segmentation & targeting
- AI-generated product descriptions
- Automated invoice & document processing
- Customer churn prediction models

Healthcare

- AI-assisted diagnostics & imaging
- Clinical note summarisation (LLMs)
- Patient flow optimisation
- Drug discovery acceleration

Finance & Insurance

- Real-time fraud detection
- Automated risk assessment
- Contract review & compliance AI
- Customer support automation

Every Company

- AI email writing & summarisation
- Meeting transcription & action items
- Internal knowledge base (RAG systems)
- HR candidate screening assistance

The 5 Most Common AI Failures

1. "Garbage in, garbage out" data

Siloed, unclean, inaccessible data makes even good AI useless. Data readiness must come before model selection.

2. Endless PoC Purgatory

44% of AI pilots never reach production. Build for deployment from day one; involve operations teams early.

3. Human resistance & fear

"Will AI take my job?" is real anxiety. Lead with empathy, retrain proactively, involve people in the change.

4. Data security & privacy blind spots

Samsung banned ChatGPT after source code leaked into the model. Use enterprise-grade, GDPR-compliant tools. Never feed confidential data to public AI.

5. Lack of strategy — "AI for AI's sake"

Chasing trends without tying AI to specific business problems wastes budget and kills credibility. Start with the problem, not the tool.

Build vs. Buy vs. Partner

Build

Custom model or solution developed in-house or with a dev team

- Unique proprietary data advantage
- Competitive differentiation critical
- Long-term strategic asset

High cost, slow, needs AI talent

Buy

Off-the-shelf SaaS AI tools (e.g. Copilot, Salesforce AI, HubSpot AI)

- Standard business processes
- Speed to value matters most
- Limited internal AI capacity

Fast, low risk, lower expertise barrier

Partner

Work with AI providers, research institutions, or HPC centres like Arctur

- Domain-specific problem to solve
- Access EU R&D funding (FFplus)
- Need expertise + infrastructure

Best for SMEs shared cost, proven expertise

For most non-tech companies: **Buy for common tasks + Partner for domain-specific innovation.** Build only when you have a true data moat.

The EU AI Act: What You Must Know

Risk-Based Classification

Unacceptable Risk
banned outright (social scoring, real-time biometrics)

High Risk
recruitment, healthcare, education: strict compliance rules

Limited Risk
chatbots, content generators: transparency disclosures required

Minimal Risk
most business tools: no restrictions, operate responsibly

Key Dates

AI Act in force	Aug 2024 ✓
Prohibited uses banned	Feb 2025 ✓
GPAI model obligations	Aug 2025 ✓
Full enforcement	2026–2027

Non-Compliance Fines
Up to **€35M or 7% of global turnover** — whichever is higher. Plus service bans and reputational damage.

Action now: Audit which AI tools you use, classify their risk level, and ensure GDPR-compliant data handling in all AI workflows.

Best Practices That Actually Work

Start with the problem, not the tool

"We need AI" is not a strategy. "We lose 15% revenue because orders are processed late — can AI fix that?" is.

Measure ROI from Day 1

Define success metrics before you start. Time saved, error rate reduction, revenue impact. 74% of companies that measure AI see positive ROI.

Appoint an AI Champion

Someone who bridges tech and business. Not necessarily a data scientist — a business person who's enthusiastic and credible internally.

Build AI Literacy, Not Just AI Tools

44% of employees lack confidence to use AI. Train people on prompting, limitations, and when NOT to trust AI output. Humans stay in the loop.

Iterate in 30–90 day cycles

Use the 30/90/365 framework: quick wins in 30 days, first production system at 90, strategic transformation at 365. Don't plan 3-year AI roadmaps upfront.

Privacy & security by design

Use on-premise or private cloud AI where possible. Never input confidential data into public LLMs. Enterprise tools with data isolation are worth the cost.

Arctur's Perspective

What AI Means for Arctur and for You

For Arctur

AI is not a separate department — it is how we do everything. From cancer diagnosis assistance (CLASSICA) to smart tourism (FLOWS, LLMs4EU), AI lets a small team at a Slovenian HPC company compete at EU scale.

The mindset shift we needed

Before: "We need to hire an AI team"
After: "Every team needs AI literacy"

Before: "Our data isn't ready for AI"
After: "Start with what we have, improve as we go"

Before: "Let's watch and see what AI can do"
After: "We shape what AI does in our domain"

What changed internally

Engineering velocity doubled on AI-augmented tasks. We use AI for literature review, code review, reporting, client analysis. Every team member is encouraged to experiment — and share results.

Our offer to Industry: Arctur supports SMEs across Europe through EuroCC, FFplus, and SLING (NCC SLING), helping companies access HPC & AI without building it from scratch.

Start Today!

Three actions that cost nothing

1. Map your pain points

List the 3 most repetitive, manual, or error-prone tasks in your company. These are your first AI candidates.

2. Audit your AI tools

Identify every AI tool being used — officially or not. Check GDPR compliance and EU AI Act risk classification for each.

3. Find a pilot partner

Don't try to do it alone. Talk to NCC Slovenia, Arctur, SLAIF or an AI consultancy. Use EU funding programs: FFplus covers HPC & AI pilots.

Questions? Let's connect →

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Hvala za udeležbo!

Thank you for attending!

SLAIF
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arnes

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Financerja / Financed by:

REPUBLIKA SLOVENIJA
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EuroHPC
Joint Undertaking

Projekt SLAIF: Slovenska tovarna umetne inteligence je finančno podprlo Ministrstvo za visoko šolstvo, znanost in inovacije. Projekt je bil na razpisu skupnega podjetja EuroHPC izbran za financiranje v okviru programov Obzorje Evropa ter Digitalna Evropa.

SLAIF: Slovenian AI Factory has been funded by the Ministry of Higher Education, Science and Innovation of Republic of Slovenia. At a call by EuroHPC JU, the project has received a positive funding decision under Horizon Europe and Digital Europe Programmes.