

# Swiss AI Index 2021

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## Survey "Swiss AI Index"

This survey evaluates a company's activities in the use of AI technology.

The survey takes about 40 minutes to complete. The best practice use case around 30 minutes.

If you have any questions about the survey while filling it out, please contact Dr. Daniela Suter (Mindfire, [daniela.suter@mindfire.global](mailto:daniela.suter@mindfire.global)) or Stefan Pabst (W.I.R.E., [stp@thewire.ch](mailto:stp@thewire.ch)).

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The "Swiss AI Index" is based on the following definition of Artificial Intelligence (AI):

AI can automate decisions that otherwise require human intervention. More precisely, AI is a collective term for computer systems – encompassing fields such as Machine Learning, Artificial neural networks, Natural Language Processing, or Computer Vision – that for a given set of human-defined objectives, make predictions, recommendations, or decisions influencing real or virtual environments.

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Please send the final form by 30 September, 2021 to: [daniela.suter@mindfire.global](mailto:daniela.suter@mindfire.global)

## Company Information

1) Name of the company\*

2) Headquarter / office of the company (canton)\*

3) Status of the company

Start-up

SME (< 250 employees)

Large enterprise (>250 employees)

4) Industry\*

## Technology & Data

*This section asks which AI technologies the company uses and in which area they are used.*

5) What are the fields of application of AI in your company?\*

Perception (Sensor data processing and interpretation)

Understanding (Evaluation, recollection, decision and prediction)

Communication (Natural language processing, Human-machine interaction)

Action (Robotics, Software robotics)

Other:

6) Where are AI technologies utilized?\*

Customer Service

Cyber Security

HR

IT

Legal & Compliance

Logistics

Marketing

Operations

Procurement

Research and development (R&D)

Production

Sales

Strategy

Other:

7) Please read the following statements and mark the respective bullet point to indicate the status of AI in your company\*

	yes	yes, partially	no
We have a proof of concept for our AI solution/project/use case			
AI is primarily used by one department			
Routine tasks are already automated by AI (e.g. chatbot for customer support, Robotic Process Automation)			
Complex non-routine tasks are covered by AI			
AI solutions support us in our business decisions			

**8) Where are AI technologies trained or deployed?**

on own hardware / servers

in cloud-based applications

on endpoint devices

at the edge (intermediary computing layer between the cloud and the devices that need computational power)

Other:

**9) What is the highest grade of automation through AI systems within your company?\***

Rule-based systems are applied

Algorithms recommend, humans make final decisions

Algorithms make partial decisions

Majority of routine decisions are made and executed by algorithms

Other:

**10) Assume your company was a car, where would you place your company regarding the use of AI?\***

Level 1: The driver and the automated system share control of the vehicle.

Level 2: The automated system takes full control of the vehicle: accelerating, braking, and steering.

Level 3: The driver can safely turn their attention away from the driving tasks, e.g. the driver can text or watch a movie.

Level 4: As level 3, but no driver attention is ever required for safety, e.g. the driver may safely go to sleep or leave the driver's seat.

Level 5: No human intervention is required at all.

11) Considering your AI solution/project/use case, what are the biggest challenges?\*

	<ul style="list-style-type: none"> <li>▪ data heterogeneity</li> <li>▪ data storage</li> <li>▪ internal politics / lack of management commitment</li> <li>▪ general lack of expertise in AI</li> <li>▪ ethical issues</li> <li>▪ high costs</li> <li>▪ hurdles during implementation</li> <li>▪ proof of added value through AI</li> <li>▪ data bias</li> </ul>
Top 1	
Top 2	
Top 3	

Comments:

12) How well prepared do you think your company is for the successful use of AI technologies and applications?\*

not enough

0

1

2

3

4

5

6

7

8

9

10

excellent

## Workforce

*This section is looking into your workforce and the grade of automation within your company.*

13) Number of employees in entire company (in FTE)\*

14) Number of employees assigned to AI roles in entire company (in FTE, roughly)\*

15) Which job profiles are dedicated to the implementation of AI projects in your company?\*

Chief Technology Officer (CTO)

Chief Innovation Officer (CIO)

Data Scientist

Data Engineer

Data Collection Specialist

ML Engineer

AI Architect

AI Project Manager

AI Implementation Specialist

AI Researcher

Change Management / Transformation Manager

Other:

16) Which job profiles dedicated to AI projects are you currently seeking for your company in 2022?\*

Chief Technology Officer (CTO)

Chief Innovation Officer (CIO)

Data Scientist

Data Engineer

Data Collection Specialist

ML Engineer

AI Architect

AI Project Manager

AI Implementation Specialist

AI Researcher

Change Management / Transformation Manager

Other:

**17) Does the company offer internal or external training in AI technologies for employees?\***

No

Not yet

Yes, please specify:

## Business

This section asks about finance and investments in AI and is looking into the utilization of AI technologies.

**18) We have a clearly defined annual budget for AI topics and projects**

Yes

Yes, partially

No

**19) What were your net sales in 2020?\***

- 0 - 50 million CHF
- 50 - 500 million CHF
- 0.5 - 1 billion CHF
- 1 - 5 billion CHF
- > 5 billion CHF

**20) How much did you roughly spend on AI activities in 2020?\***

- 0 - 1 million CHF
- 1 - 5 million CHF
- 5 - 20 million CHF
- 20 - 50 million CHF
- > 50 million CHF

**21) How much will your company increase its investments in AI in the next 3 years?\***

- Will stay the same
- Increase up to 50%
- Increase between 50% and 100%
- Increase of more than 100%
- This is currently unclear
- A reduction is planned

**22) How many of your AI developments have been filed as patents? (in 2020)\***

## Strategy

This section is dedicated to ask about strategic aspects regarding the use and implementation of AI in your company.

### 23) Is there an AI strategy in place?\*

No

Not yet

Yes, a rudimentary strategy

Yes, we have a fully decided and implemented AI strategy in place

Not applicable

### 24) Which benefits does the company want to achieve with AI?\*

Better decision-making

Enhancing existing products and services

Gain efficiency

Personalized customer experience

Development of new products and services

Making employees more productive

Cost savings (e.g. for infrastructure or staff)

Exploring new business models

IT systems and computing support

Synergy between human and machines

Other:

### 25) How does your company get its AI systems & technologies?\*

Buy all from external companies

Even blend of buying and building

Buy more than build

Build more than buy

Build all

26) Is there any exchange or cooperation between your company and research institutions?\*

No

Yes, please specify:

## Governance

*This section is looking into governance in AI including the sustainable use of AI and ethics.*

27) For which of these key areas for a sustainable use of AI technology has your company established concrete, context-specific guidelines or standards for employees?\*

Explainability standards

Fairness appraisal

Safety considerations

Human-AI collaboration

Liability frameworks

Other:

28) What risks does your company consider to be most critical to the success of AI initiatives?

Please select three risks.\*

Violation of customers privacy rights Cybersecurity vulnerabilities

AI failures with high impact on current business New governmental regulations

Liability issues on AI decisions

Limited explainability of solutions used Ethical issues

Job losses through higher automation levels Energy demand

Other:

29) Does your Code of Conduct incorporate ethical use of data and AI?\*

No

Partially

Yes

30) Please add your contact details for any further inquiries (full name, email, phone): \*

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You are at the end of our survey.

In the next part you have the chance to provide us with a best practice example. All use cases will be evaluated by a jury, the best cases will be made publicly available (branded or unbranded).

Thank You!

Please send the final form by **30 September, 2021** to: [daniela.suter@mindfire.global](mailto:daniela.suter@mindfire.global)

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## Best Practice Evaluation Form

With the "Swiss AI Index" we reward remarkable AI achievements. Please take the time to describe a non-confidential project that could be of interest to other companies and/or to the public. All best practice examples will be evaluated by a jury of experts and the most innovative use cases will be awarded and published.

1. What is the name of the project/ best practice example?
2. Field of technology (e.g. mobility & logistics, robotics, communications...)
3. Field of use (e.g. predictive analytics, intelligent automation, intelligent assistance... )
4. For which business functions does your AI technology create value (e.g. R&D, HR...)

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5. Problem description (200 words)

6. Description of the solution (including data sources, hurdles...) (200 words)

7. Project status & key achievements (200 words)

8. Learnings (100 words)

We really appreciate your time and effort taken to conduct this survey and best practice form.

We wish you and your company great success and are looking forward to informing you about the "Swiss AI Index" in the future.

**Thank You!**