GPAI | THE GLOBAL PARTNERSHIP ON ARTIFICIAL INTELLIGENCE

11-12 NOVEMBER 2021 PARIS

14h30-15h30

FUTURE OF WORK WORKING GROUP

Uday B. Desai
Indian Institute of Technology Hyderabad, India

Yann Ferguson
The Toulouse Institute of Technology, France

Yuko Harayama
RIKEN, Japan

Anne-Marie Imafidon
Stemettes Institute for the Future of Work, United Kingdom

Matthias Peissner
Fraunhofer IAO, Germany

Start-up phase

	July	August	September	October	November
Timeline					Plenary December 3-4
Deliverables	**Kick-off meeting** ▪ Initial mandates' scope & deliverables discussion ▪ Assignment of each thematic to a sub-group on a volunteering basis	**Sub-groups deliverables discussion** ▪ Discussions and identification of sub-groups outputs	**Sub-groups final deliverables** ▪ List of final outputs and deliverables for the plenary	**Plenary final deliverables** Plenary deliverables finalization	
Dates	**Session 1** July 15	**Session 2** September 8	**Session 3** September 21	**Session 4** October 13	**Session 5** November 17

Transition phase

Projects concept-notes definition

Committee meetings → **Concept note redaction by committees** → **Proofreading & validation**

Meeting 1
Jan 22

Project list definition

Meeting 2
Feb 12

Validation of Projects

Meeting 3
Feb 26

Validation of concept notes

Meeting 4
March 30

Submitted to Steering Committee

1. Observation Platform of AI at the Workplace
2. Fair Work for AI

Toward a more sustainable path

April | May | June | July | August

Plenary 5
April 26

Plenary 6
May 18

Plenary 7
June 21

Plenary 8
July 22

September | October | November | December

Plenary 9
Sept 2

Plenary 10
Sept 30

2nd Multistakeholder Plenary

Plenary 11
Dec 9

3. AI Living Laboratory

Three projects

To understand the presence and shape the future of AI@work

Observation Platform of AI at the Workplace

STATUS QUO

Analyse and understand

- how AI is used today
- the impact of AI at work

AI for Fair Work

NORMATIVE

Develop and negotiate

- principles for fair AI at work
- processes to implement them

AI Living Laboratory

EXPLORATIVE

Virtual and physical platform

- experience AI use cases
- experiment new approaches

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Observation platform at the workplace

Yann Ferguson
Laurence Devillers
Lay Lim Teo
John Hepburn
Oliver Suchy
Borys Stokalski
Carl Frey
Alexandre Reeberg de Mello

01

Objectives of the platform

Objectives of the platform

Understanding what AI does to work & workers and what work & workers do to AI

Compilation and analysis of ongoing/concluded **experiments and real-world cases of AI at the company level**; providing insights into the current state-of-the-art in AI interfaces and AI-driven processes from the workers' perspective.

Building **a catalog of use cases of AI systems** deployed in workplaces and organizations.

*Building a **snapshot of AI** at work based on answers to a questionnaire from **actors in AI systems integration**, executives, designers, managers, employed in different sectors and organizations of different types and sizes: public, private and non-profit sectors, large groups, small & medium enterprises, and start-ups.*

Feeding the other working groups and, eventually, to discuss the dominant theories on the future of work.

It can also be useful for anyone interested in how AI systems are implemented in the workplace.

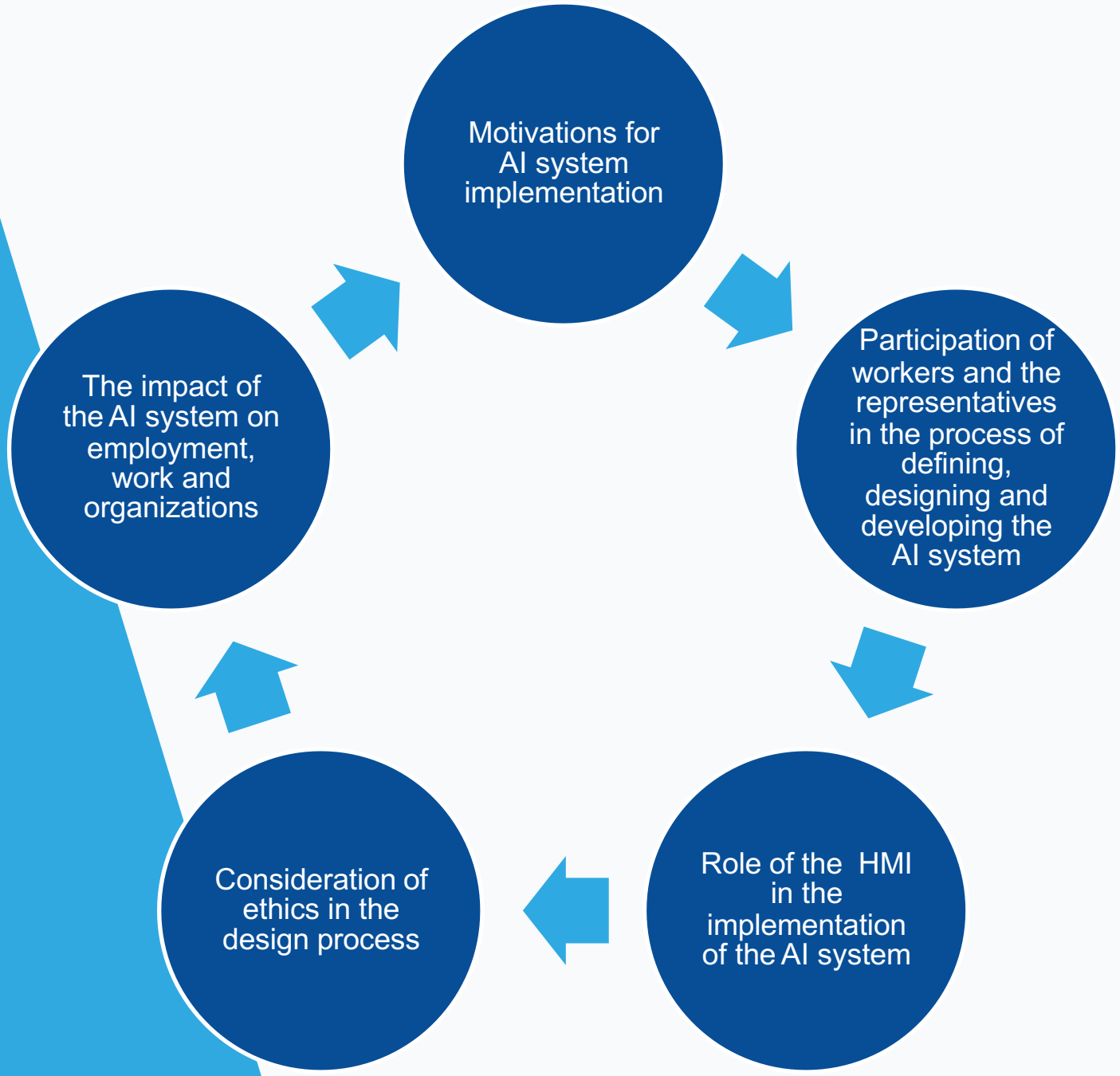
02

Building a catalog of real use cases of AI systems deployed in workplaces and organizations

Building a questionnaire

In 2021, we then to systematize the **interview survey**. These interviews last **75 minutes** on average and focus on **a real use case**:

An AI system that is being integrated into an organization at the proof-of-concept or production stage and whose respondents can testify about the 5 dimensions of our questionnaire.



The students' community

GPAI junior investigators to

- Increase the number and quality of use cases in our catalog.
- Offer a high level international experience that enriches the students' skills.
- Prepare the future generation of GPAI Experts.

✓30 use-cases
✓7 countries
✓2022: 20 GPAI Junior Investigators

Alejandra Rojas Sierra

Louison Carroué

Justine Dima

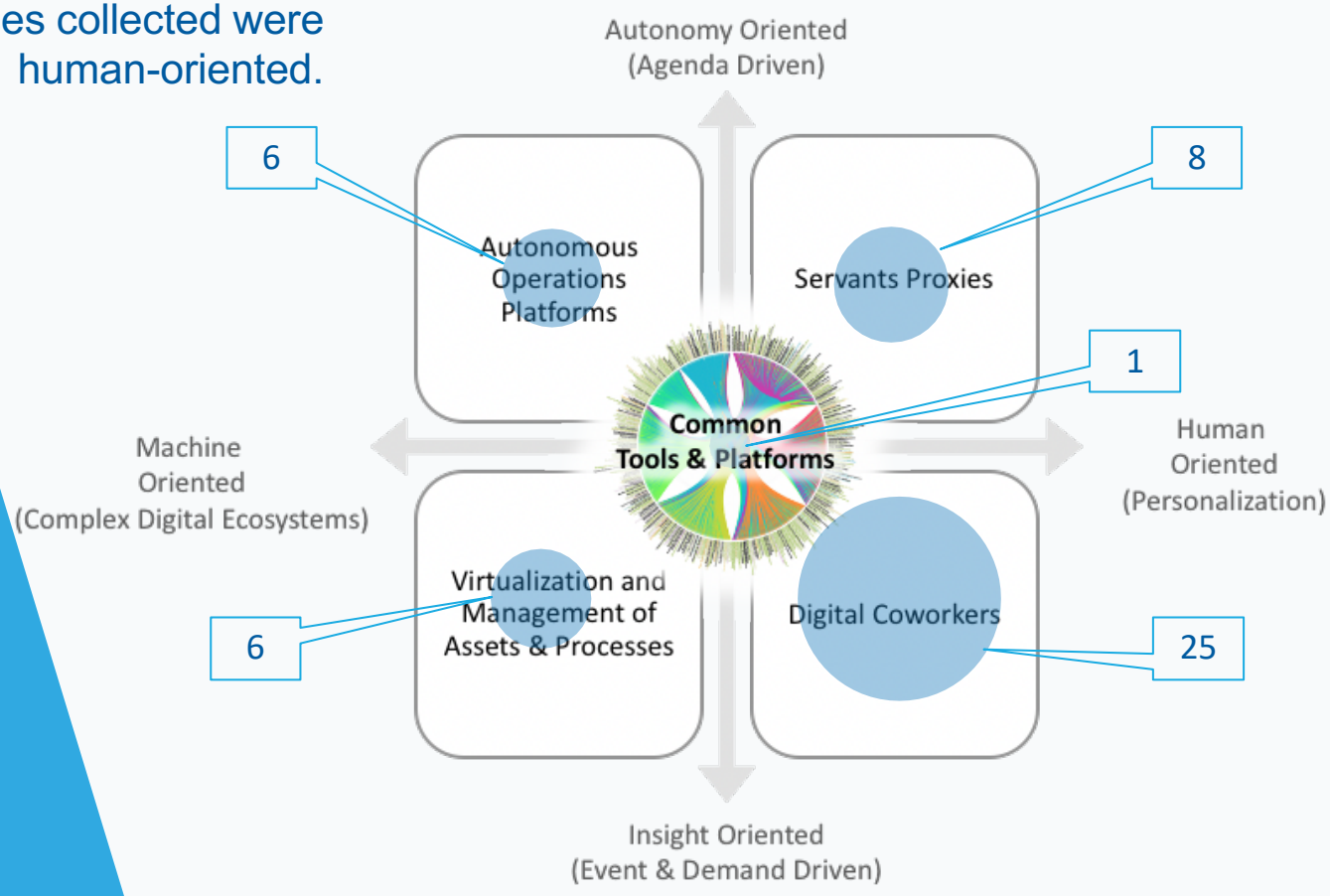
Anne-Charlotte Mariel

Sara de Martino

Choice of usecases

- No sectoral approach or by sort of AI system
- Connecting with OECD
- Finding more end-users: a challenge
- 2022: using a taxonomy for more diversity

In 2020, 25 of the use cases collected were human-oriented.



- Behavior expected from the AI-system: Autonomy/Insight
- Immediate beneficiary/user of the AI-system: Human/Machine

Borys Stokalski, Bogumił Kamiński, Robert Kroplewski: *Design Patterns for AI Solutions: Towards a Constructive Approach to Smart System Design and Implementation*, SGH Warsaw School of Economics Working Papers, 2021

03

Findings and recommendations

What use-cases say...

General comments

Most of these use cases are Proof of Concept (PoC)

Performance is a necessary but not sufficient condition, because AI systems challenge organizations:

- ✓ **Reorganize**: AI systems imply rethinking the organization of the activity.
- ✓ **Socialize:** AI systems destabilize the value system associated with the activity.
- ✓ **Practice**: AI systems transform, generate or destroy professional practices.

Beyond success or failure, experiments enrich organizations

- ✓ A PoC is **an obligatory step** to apprehend the properties and potentialities of AI systems and develop a shared culture.
- ✓ The realization process of a POC produces **an organizational learning effect** because it engages a formalization process of the knowledge and know-how of an organization.

Recommendations

From inspiring practices or recurring problems

The success of a use case

- ✓ **Establishing methodological principles of a POC beyond the performance of the AI system**
- ✓ Encourage and improve the integration of academic research

Empowering the worker

- ✓ **Define the right trade-offs between usability and user involvement**
- ✓ Build a situated explainability of an AI system
- ✓ Develop a general AI training independent of a particular application

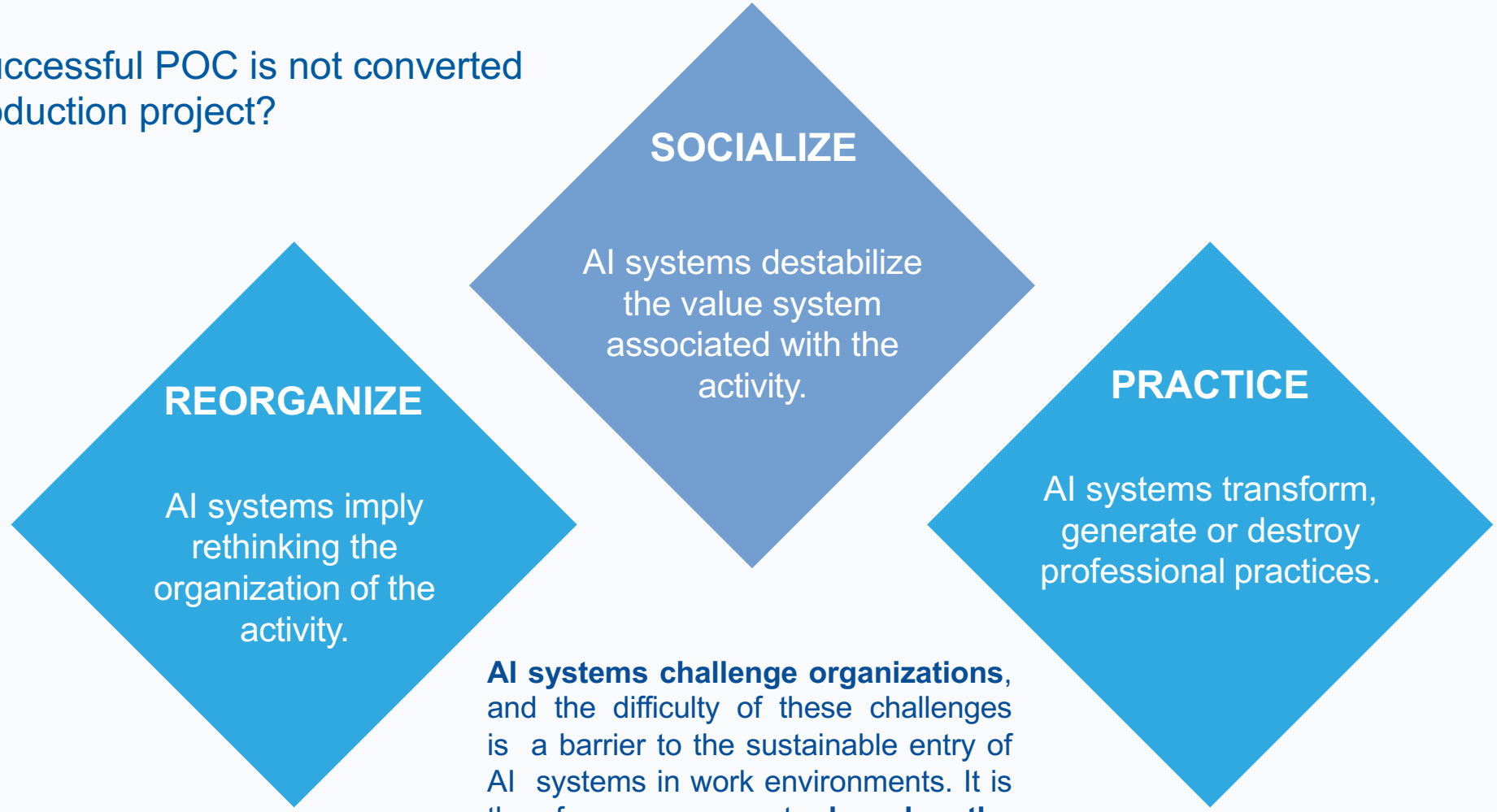
Fair AI

- ✓ **Accompany use-cases with an independent ethics committee**
- ✓ Diversify design teams to reduce bias in data

The success of a use case

Establishing methodological principles of a POC beyond the performance of the AI system

Why a successful POC is not converted into a production project?



AI systems challenge organizations, and the difficulty of these challenges is a barrier to the sustainable entry of AI systems in work environments. It is therefore necessary to **broaden the measure of success** of a POC to include **extra-technological issues**.

Empowering the worker

Define the right trade-offs between usability and user involvement

Instead of giving a result, an application organizes a skin disease diagnosis interaction between the system and the doctor

Manager : "*It is an application, an interface that we created and adapted to our needs. We often have discussions about the display and the wording, what is the simplest for the user*".

- ✓ The easier the user experience of an AI system is, i.e. fluid, user-friendly, intuitive, ergonomic, the faster the AI system will integrate professional practices.
- ✓ But these can also generate **passivity** and lead to a disengagement synonymous with **disempowerment**.
- ✓ HMIs should consider good levels of **compromise** between user-friendly and **cognitive engagement** of the user.

User-friendly AI systems must keep the human in the loop!

Fair AI

Accompany use-cases with an independent ethics committee

A video surveillance image analysis company has all its new projects assessed by an independent ethics committee.

- ✓ Despite apparent consensus on the centrality of ethical issues, the **understanding of ethical issues is not homogeneous**.
- ✓ Many countries and organizations have produced regulations, commitments or ethical charters, but there is a missing link in the chain: the implementation of these principles for a particular AI system, in a specific economic and social context.

AI at workplace need **practical AI ethics skills.**

- ✓ **Public authorities** may have a role to play in encouraging the integration of ethics in the development of an AI system and in its deployment in a profession.

They could **organize and finance the constitution of independent ethical committees**, bringing together a variety of skills, which **project leaders could call upon for support**.

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AI for Fair Work

Dr Anne-Marie Imafidon MBE

AI for Fair Work

01

What we want to do

Project vision

Principles

Create a set of AI for Fair Work principles through tripartite consulatation which:

A)Set a global standard of fairness in workplace applications of AI technologies

B)Correct the faliures of previous AI ethics frameworks

Implementation

The project also aims to create infrastructure to support the implementation of these principles by launching a public accreditation scheme to support and evaluate employers

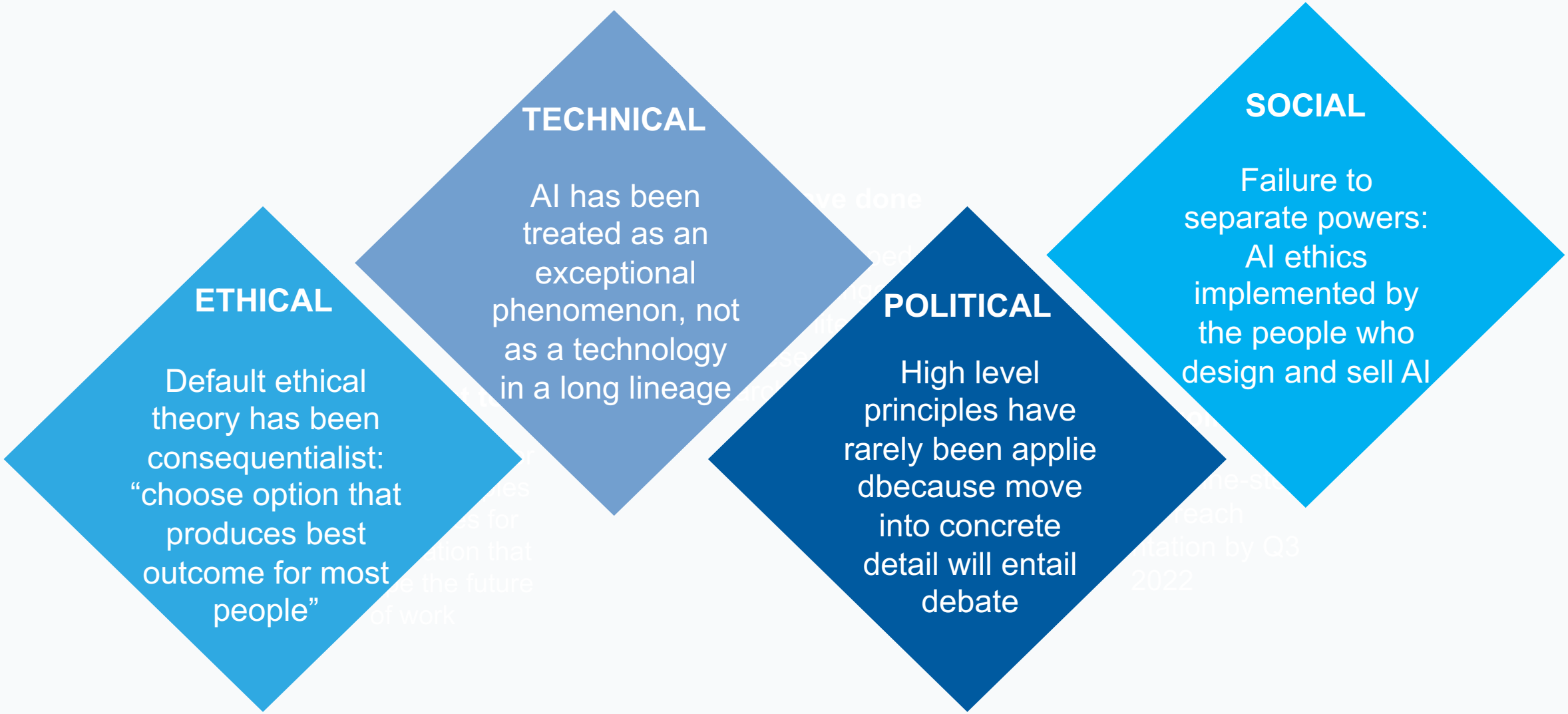
Scale

Our theory of change forsees the first employer accredited shortely after public launch in Q3 2022 but this limited scope can be rapidly expanded

02

What we have done

Four critiques of the existing AI ethics approach



See **Cant, C. Cole, M. Ustek Spilda, F and Graham, M.** (forthcoming) ‘*AI For Fair Work? A Critical analysis of AI Ethics in the Context of Work*’

03

What we will do next

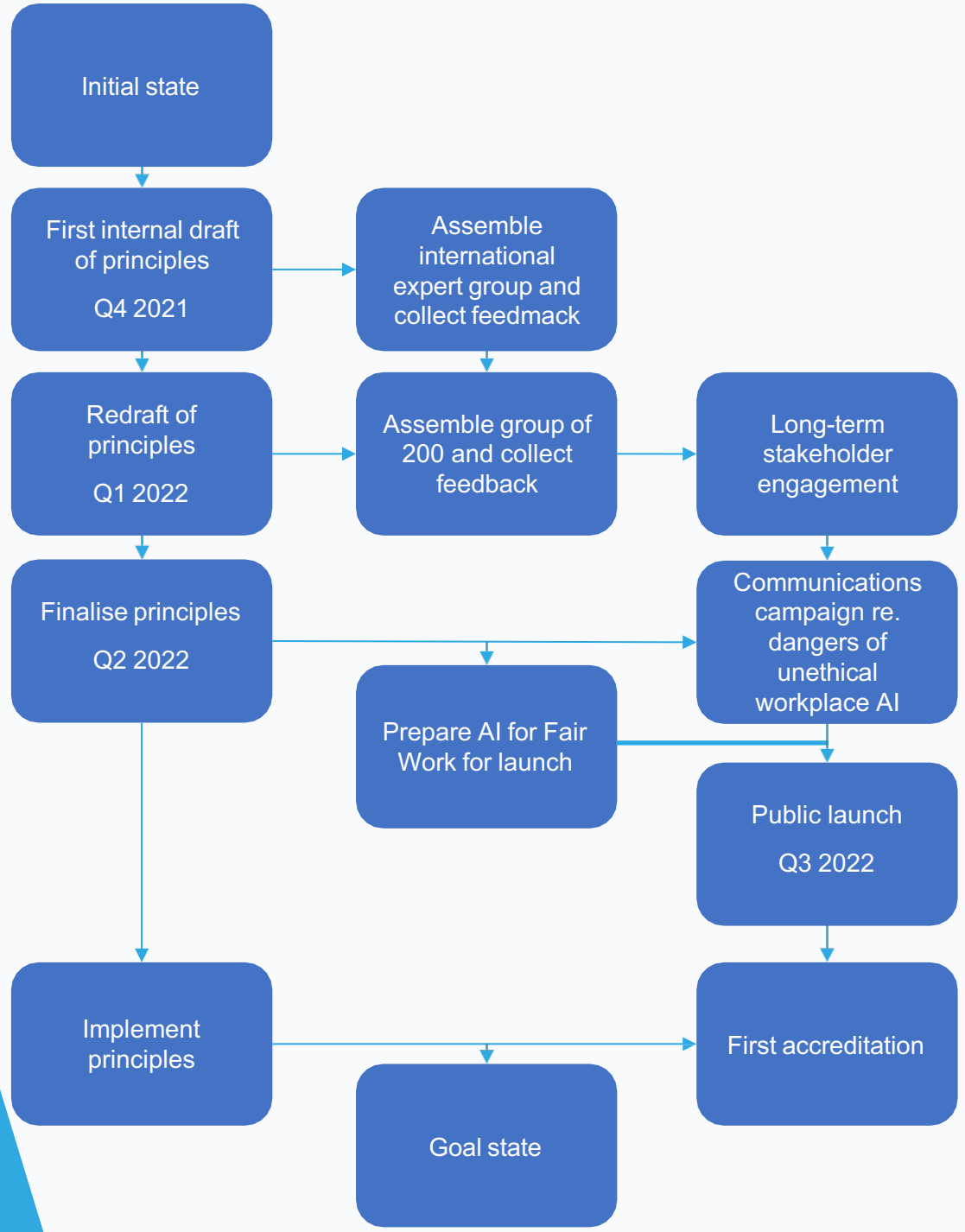
Theory of change

Nine steps to get to launch of accreditation scheme by Q3 2022

First internal draft of principles by end Q4 2021

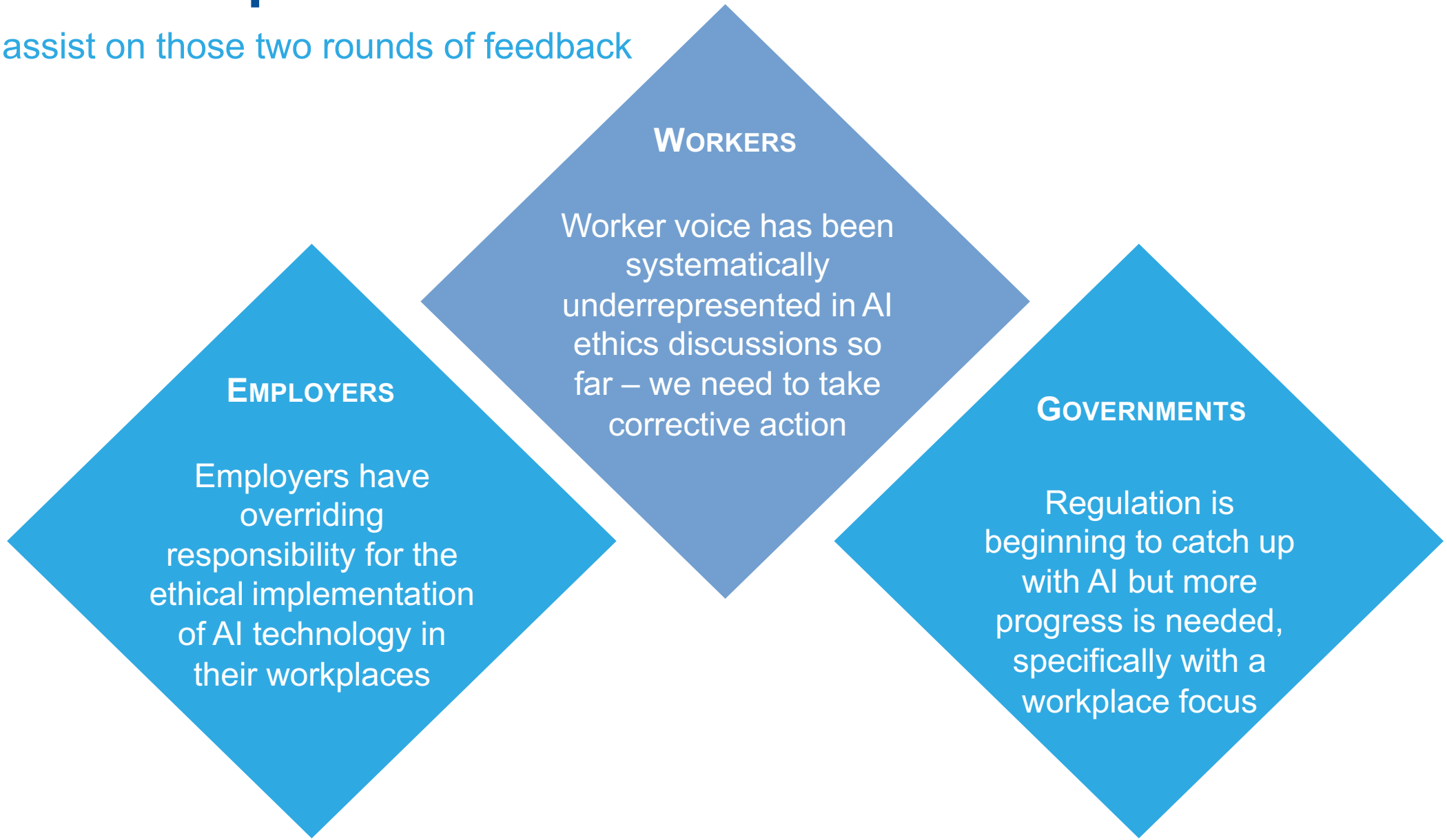
Two rounds of feedback with groups of tripartite stakeholders result in outward- facing iterative draft of principles by Q2 2022

Then transition into creating the structures required to launch principles and accredit compliant employers



Partnerships

To assist on those two rounds of feedback



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AI Living Lab

King Wang Poon
Yann Ferguson
John Hepburn
Michela Milano
Palmer Luckey
Uday Desai

Context

Definitions

- Ballon (2005): “an experimentation environment in which technology is given shape in real-life contexts and in which (end) users are considered ‘co-producers’”.
- Westerlund and Leminen (2011): “… are physical regions or virtual realities where stakeholders form public-private-people partnerships (4Ps) of firms, are collaborating for creating, prototyping, validating, and testing new technologies, services, products, and systems …”.
- Living Labs are “***co-creation ecosystems for human-centric research and innovation***” (Wetserlund and Leminen, 2011), “in which to solve societal challenges, especially for urban areas, by bringing together various stakeholders for collaboration and collective ideation” (Hossain, 2019).

Proposed AI Living Lab and Objectives

- **Proposed Living Lab:** Will be a ***virtual place***, connecting a network of physical Living Labs. It will allow sharing applied experiments for assessing the impact of AI at both individual and company levels.
- **At the individual level**
    - the Living Lab will allow citizens to experience AI (albeit virtually)
    - share their experience on AI at work, and connect with similar AI communities and individuals.
- **At the company level**
    - they will find information for effective deployment of AI
    - they will be able to conduct virtual experiments
    - find experts for conducting experiments
    - find a catalogue of guidelines for using AI
- Living Lab platform will have the potential for collaboration across different groups in FoW as well as in GPAI, across academic institutions and across companies

Deliverables

- **Phase 1 - Design and develop a "minimum viable product" (Q2-Q3 2022)**
  - platform will be built as a website that can be accessed via a mobile device and it will include the following contents together with a search functionality:
  - case studies (or links to them) of AI Obsrvatory Project in FoW Group
  - additional use cases of specific identified areas e.g. chatbots, library of videos, and learning/skilling resources.
  - Preliminary implementation of AR/VR
  - seminal national reports/publications/living lab initiatives related to future of work from participating member countries in GPAI
- **Deliverable 1**: Web-based resource platform (available at the 2022 GPAI Summit)

Deliverables …

- **Phase 2 - Design and develop a demonstration prototype of an interactive platform (Q4 2022-Q1 2023)**
    - Interactive platform will include: (i) interactive resources that anyone in the world can experiment with to develop their own AI strategies - these could be related to chatbots, AR/VR, skills/learning, and tasks/skills/job redesign that have the potential for international impact; (ii) additional resources similar to Phase 1

- **Phase 3 - Design and develop a collaborative platform on top of the interactive platform and information resource (Q2-Q4 2023)**
    - This collaborative platform will include: (i) features that allow for exchange of ideas and/or for communities of interest/practice and to form AI communities; (ii) online spaces for collaborations on projects (these projects could possibly be curated before approval).

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QUESTIONS?