Scope of the I&C Working Group

Mandate

The Innovation and Commercialization Working Group will study and recommend tools and methods for driving international collaboration on AI R&D and innovation, for advancing research results into products and processes, and for transferring these results to industry, with a special focus on SMEs.

It will examine support measures to facilitate these advances, including standards and norms, self-certification etc.

Co-chairs

Jean-François Gagné,
VP of AI Strategy and Product Management, ServiceNow (Canada)

Francoise Soulié-Fogelman,
Scientific Advisor at Hub France IA (France)

I&C Experts collectively chose to carry out two concrete projects in 2021, focusing on SMEs
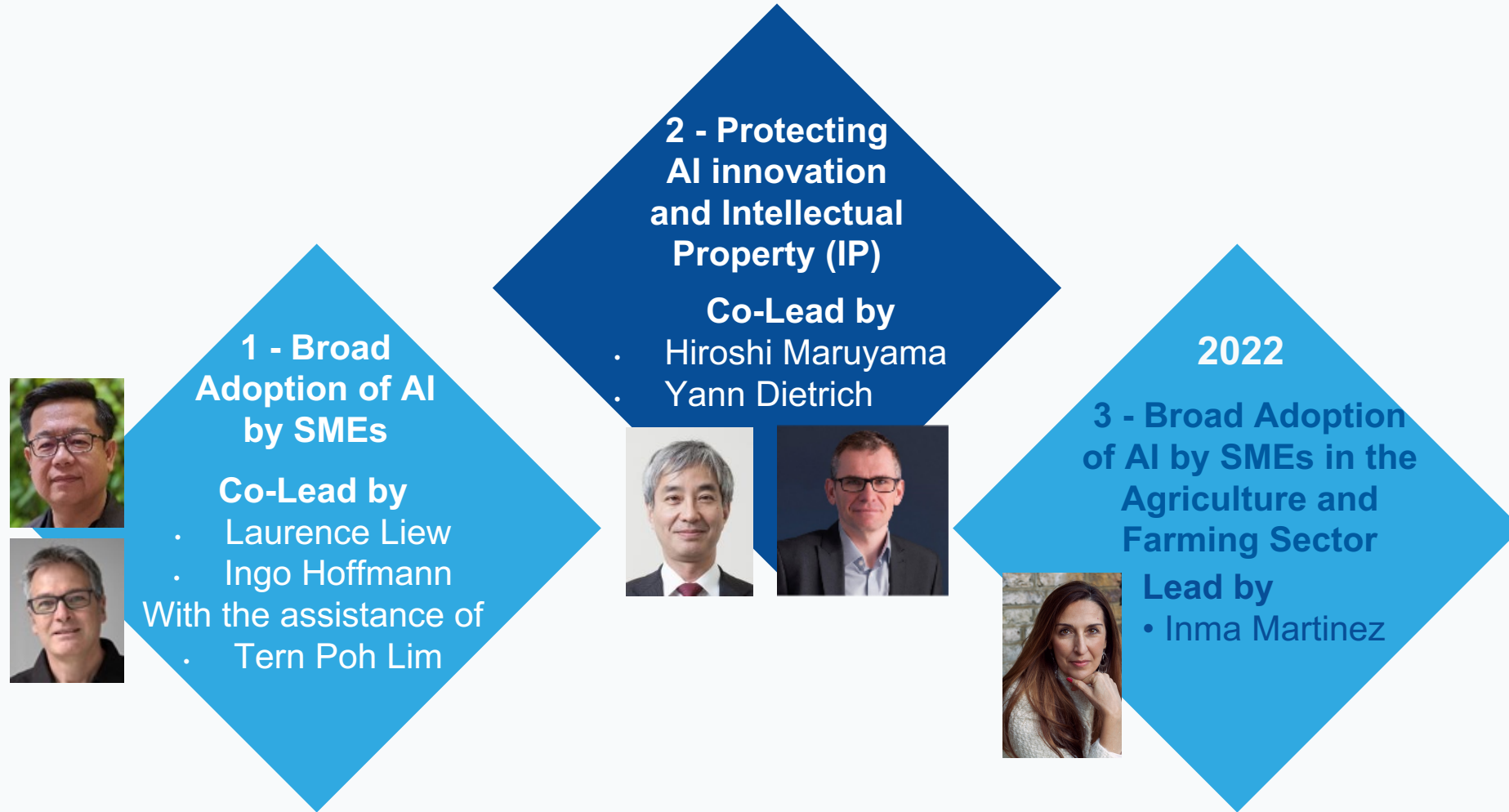
1 – Broad Adoption of SMEs

The SMEs Committee seeks to support SMEs to adopt AI which will help them increase their competitivity and ensure that their workforce will continue to be economically relevant.

2 - Protecting AI innovation & Intellectual Property (IP)

The IP Committee's main objective is to support startups and SMEs in achieving a deeper understanding of the challenges they face in the area of IP as it relates to AI.

Hence, two separate committees were created, and Experts/Observers were invited to join In 2022, a third committee will be started

2 - Protecting AI innovation and Intellectual Property (IP)

Co-Lead by
- Hiroshi Maruyama
- Yann Dietrich

1 - Broad Adoption of AI by SMEs

Co-Lead by
- Laurence Liew
- Ingo Hoffmann
With the assistance of
- Tern Poh Lim

2022

3 - Broad Adoption of AI by SMEs in the Agriculture and Farming Sector

Lead by
- Inma Martinez

01

Broad Adoption of AI by SMEs

SMEs' share of jobs   **80%**

GNP contribution   **70%**

SMEs face challenges with:

Resources
Skills
Data
IT infrastructure

Matching SMEs
to AI Providers

Increase the AI Maturity of SMEs
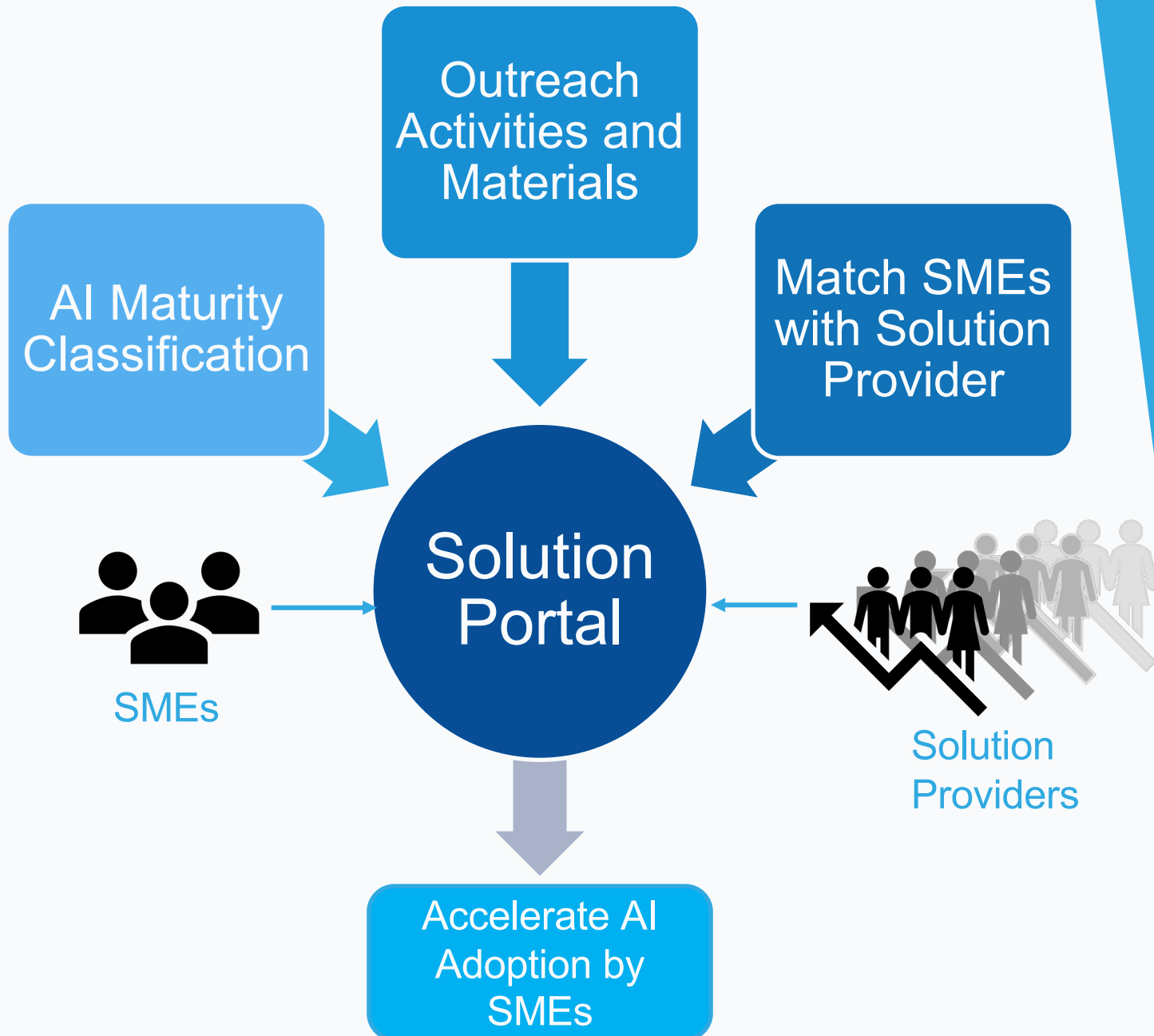
Edu resources,
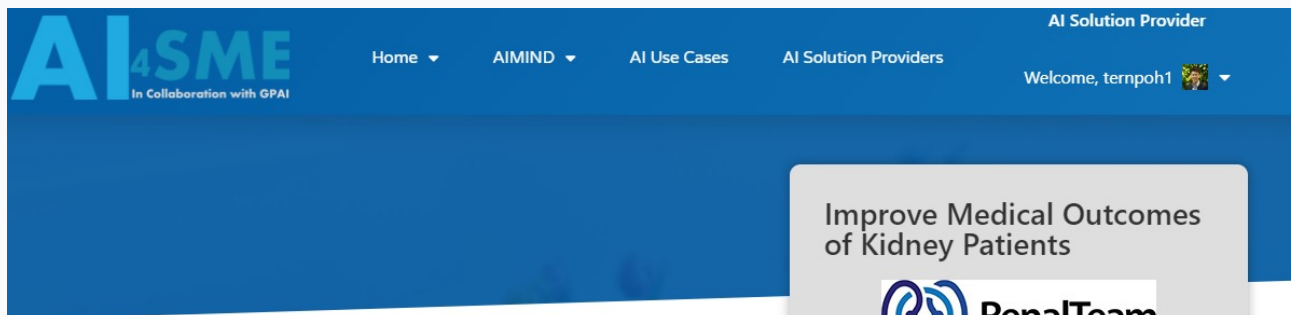outreach and AI Index

Overview of SME Committee's Objectives & Activities

SMEs represent a large part of our economies, and these organizations must be supported now to adopt AI and stay relevant.

Outreach Activities and Materials

AI Maturity Classification

Match SMEs with Solution Provider

Solution Portal

SMEs

Solution Providers

Accelerate AI Adoption by SMEs

GPAI / THE GLOBAL PARTNERSHIP ON ARTIFICIAL INTELLIGENCE

Overview of SMEs Solution Portal

The solution portal integrates all key activities and serves as a single reference for SMEs looking to adopt AI

AI4SME
In Collaboration with GPAI

Home ▾   AIMIND ▾   AI Use Cases   AI Solution Providers

AI Solution Provider

Welcome, ternpoh1 ▾

Business challenges

How can RenalTeam systematically and accurately predict which hemodialysis patient will be hospitalised within the next week?

Improve Medical Outcomes of Kidney Patients

RenalTeam

AI Maturity Suitability: AI Ready

Duration (months): 9

Implementation Cost: $100,000 to $250,000

Total Funding Amount: 25% to 50%

Eligible for Funding: Government Funding

Enquire now

Required data to complete the AI project	Patients' dialysis data
Required in-house IT and/or domain expertise	Software Engineers to deploy and integrate AI-solution into existing company's products
Regulatory compliance or standards	Compliant with relevant local regulations and guidelines on using AI for healthcare

**GPAI** / THE GLOBAL PARTNERSHIP ON ARTIFICIAL INTELLIGENCE

Success Stories

Success stories format integrates best practices and experience among member states to facilitate adoption

Management Support

AI Literacy
AI Talent

Organisational Readiness

Employee Acceptance of AI
Experimentation Culture

Infrastructure Readiness

Ethics and Governance Readiness

ML Infrastructure
Data Infrastructure

AIMIND

AI Governance
AI Risk Control

Data Readiness

Business Value Readiness

Data Quality
Reference Data

Business Use Case

GPAI | THE GLOBAL PARTNERSHIP ON ARTIFICIAL INTELLIGENCE

GPAI AI Maturity Index for SMEs (AIMIND)

AIMIND enables SMEs to identify their AI readiness and find appropriate approach to adopt AI based on their AI maturity
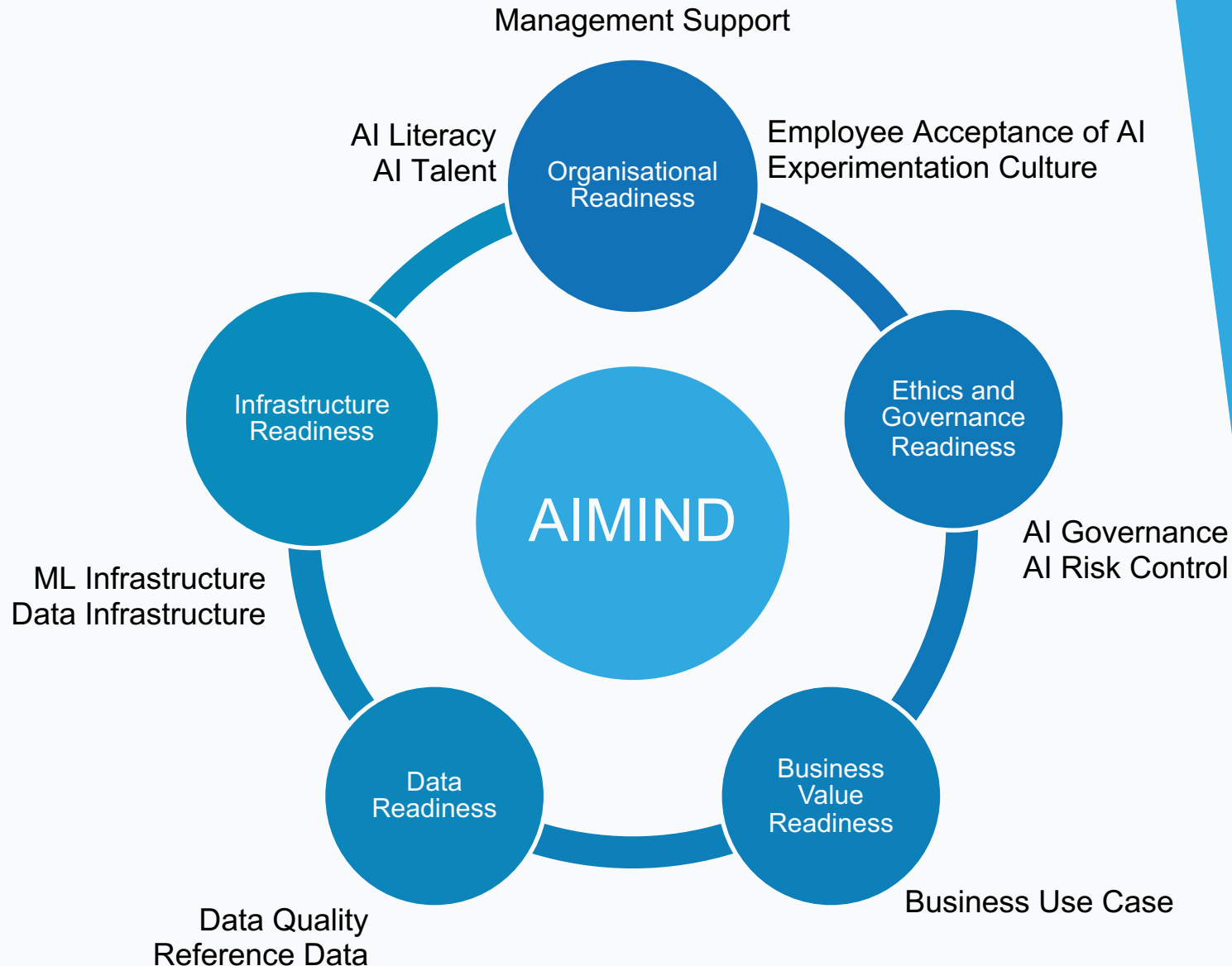
AIMIND Assessment Result

AIMIND classifies the organisation into one of four categories, each with recommendations on best approach for AI adoption

Disclaimers: The solution portal is a template that member countries could adopt and operate. GPAI will not be operating the solution portal.

Video Demonstration of Solution Portal

Each member state will adopt and localise the platform based on its own economy and requirements

The Portal will be further developed in 2022

- Conduct field tests of the platform
- Develop an AI readiness index for AI solution providers (quality assessment for listing on our platform)
- Develop a governance framework for the platform
  – Set access conditions
  – Work on security & data protection

The portal will be made available for GPAI member states

Future Developments

The Committee will further develop the Portal to drive our objectives forward

02
**Protecting
AI innovation and
Intellectual
Property (IP)**

IP Committee at a Glance

Objective

To achieve a deeper understanding of the
challenges that organizations face in the area
of IP as it relates to AI

➡ **2021 Achievements**

- Current effective IP laws
- Best practices, activities, and mechanisms
  related to IP
- How individual organizations are currently
  handling IP
- What the differences are across geographies

➡ **2022 Plans**

2021 Achievements

GPAI IP Primer

The IP Primer is a short guide for helping startup companies and SMEs that develop and use AI technologies manage their intellectual property.

Case Studies

The case studies consisted of a series of interviews with AI startup companies around the world to assess the usefulness of *GPAI AI Primer.*

GPAI IP Primer

Main Body Covers Various Aspects of IP in AI

GPAI IP Primer

Annex. Table is on Jurisdictional Comparison

Table 1 - Patents			
1 - Requirements			
EU	US	Canada	Japan
One can either file a patent at a national patent office, or at the European Patent Office (EPO).	Inventions must be novel and non-obvious, as well as not "directed to a judicial exception" "without significantly more". Approach to subject matter has evolved through substantial case law (notably *Diamond v Diehr; Alice Corp. v CLS Bank; Mayo v Prometheus Labs*, among others).	Inventions must be novel and non-obvious, and have a "discernible physical effect" (beyond "mere calculation").	Inventions need to have "novelty" (meaning, objectively something new based on the date and time when the applicant filed the patent application with the Japan Patent Office), and be "advanced". In the case of computer programs, it is sometimes disputed whether or not they "utilize the laws of nature." Since "invention" is the creation of technical ideas that "utilize natural laws," it is clear on whether mere abstract and artificially decided concepts fall under the category of the creation of technical ideas that "utilize natural laws."

Case Studies

Companies Interviewed

1. ALEIA (France)
2. Hasty.ai (Germany)
3. minoHealth AI Labs (Ghana)
4. Neural Pocket, Inc. (Japan)
5. Noodle Factory (Singapore)
6. Startupindonesia.co (Indonesia)
7. Synerise (Poland)
8. SYSPIA (France)

Major Findings

- IP strategy varies depending on the situation
- Use of open-source technologies is a major concern
- Reuse of pre-trained models is a big unknown from the AI point of view
- More jurisdictions coverage is needed
- These findings will be incorporated in the next version of the *IP Primer*

The GPAI IP Primer is welcomed very favorably: Average 8.1 out of 0-10 scale (0: useless, 10: most useful)

In 2022, the IP Committee plans on…

- Enriching the debate at an expert level with an *IP Expert.*
- Understanding the **IP implications around data and AI** of the very significant work done by the EU with various legislations in preparation/review such as the *Data Governance Act*, *Data Act*, *Database Directive*, in addition to other legislations around the world.
- Exploring a **pattern of clauses of framework data access, sharing and flows** for implementing it to free trade agreements, electronic trade rules under WTO, and/or transnational regional agreements among like-minded partners.
- Producing key recommendations for the **harmonization of rules** and mutual recognition of patenting computer-implemented AI inventions.
- Identify and summarize the **key IP issues** for further consideration by experts.
- Conducting **case studies** to get feedback about the GPAI *IP Expert.*

03

Broad Adoption of AI by SMEs in the Agriculture and Farming Sector

Adapting AI to the Agriculture & Farming – Requirements for Adoption

BEYOND THE NEED TO FEED HUMANS

Optimisation of crops and water resources and the need to increase the welfare of animals and limit their overproduction for their effect on CO2 and draining of resources

A NEW DATA CLASS

Biological data whether animal or plant, represents a challenging layer of Real Word Data (RWD) and Real World Evidence (RWE) that governments must capture, analyse and leverage from

SAFETY OF HUMAN FOOD CHAIN

MANAGING EARTH'S RESOURCES

FIGHTING RURAL NEGATIVE NET MIGRATION

Addressing the two main challenges:
1) standardization   2) improvement of business models

AI allows the A&F sector respond better and less costly to market competitive dynamics, and address consumer expectations

DETECTION & PRECISION

Detection : chronic pain and gait disorders in animals, poor plant nutrition, pest control via drones & satellite data; irrigation leaks

Precision : feeding programs; crop harvesting & yield; utilization of water resources for both crops and animal cooling; pest control; monitoring individual animal growth, health and welfare

OPTIMISATION & PREDICTION

Optimization : dairy cows; best time to harvest crops; best use of biodegradable pesticides

Prediction : illness in cattle, especially dairy cows; preventing overapplication of herbicides; price forecasting of crops based on yield rates.

TRACING & TRACKING

of crops and animal products into the human food chain.

Creating a Path to Success and a Repository of Resources for the Agriculture & Farming Sector

Nurturing an "all encompassing" ecosystem of A&F companies, associations and the AI and technology providers in order to build a cornerstone for the foundations of each GPAI member country and its own local initiatives:

1. « Awareness » phase
Outreach initiatives to engage AI-Aware A&F ecosystem members and create co-operation and collaboration for the project

The A&F Portal will reuse the structure of the "SME" Portal built in Year 1

2. "Accessibility" phase
Build a catalogue of successful AI solutions by verticals and commercial objectives

3. "Resources" phase
- Build a Portal/Resources Website for the A&F SMEs
  - to access information libraries ranging from a variety of themes ("AI Readiness", "AI Best Practices" "How to Digitize your Farm"),
  - as well as downloadable generically trained algorithms used in basic A&F AI projects.
- Compile a library of AI companies dedicated to A&F projects and information about publicly available A&F data from local sources.

In 2022, the Innovation & Commercialization Group will continue its work with 3 projects

Follow-up
- Broad Adoption of AI by SMEs
- Protecting AI innovation, Intellectual Property (IP)

New
- Broad Adoption of AI by SMEs in the Agriculture and Farming Sector

Projects will maximize collaboration with the other GPAI Working Groups by sharing information and best practices.

Questions & Answers ?