IERE
Artificial Intelligence (AI) Collaboration

Invitation to all IERE members

CLP & innogy

February 3, 2020

Invitation

Dear IERE member,

Technologies are undergoing rapid changes, and these changes affect the conventional business models as well as daily operation and planning of utilities directly and indirectly. In this regard, IERE has instigated and supported the Technology Foresight activity since 2015. Top 20 emerging and top 5 fringe technologies were identified, and IERE published a Technology Foresight 2020 (TF2020) report which does not only provide up-to-date and in-depth information as well as strategic implications, but also serve as an informative source of insights to promote collaborative R&D activities among IERE members.

Among the top 5 fringe technologies, IERE board decided to conduct an in-depth research on Artificial Intelligence (AI), to be carried out within IERE community. In November 2017, there were six nominations from the members (including CLP, CRIEPI, ENEDIS, innogy, KEPCO and TPRI) to join the research. The objectives of this in-depth research are to enrich and share participants' knowledge in different aspects of AI, and most importantly, to lay a solid groundwork for subsequent R&D collaboration. The final report and presentation can be found in IERE website.

Based on the questionnaire according the IERE Technology Foresight project 2019, 9 IERE member companies are interested in AI collaboration. And 5 of them also showed positive responses in joining the collaboration. Therefore, riding on the successful experience of in-depth research, we are now establishing a R&D collaboration.

To create as much value as possible to the participants, we, CLP and innogy, would like to kick-start this R&D collaboration. Details can be found in the following slides.

We would like to ask all members again and invite you to participate AI R&D collaboration.

Invitation

We believe that this collaboration will be a valuable opportunity for IERE members. This is, CLP and innogy, our privilege to co-lead this project. **The setup of the AI R&D collaboration is divided by three stages:**

- **Stage 1**: Define the AI use-cases
- **Stage 2**: Develop the solutions
- **Stage 3**: Share the results

Participants: Five IERE member companies have already indicated their interests to participate in the collaboration.

Results: Final results shall be presented to all IERE members. However, details of the projects will only be shared among the participating companies.

Important date: IERE members are cordially invited to join us. Please reply to IERE central office **on or before 29 February, 2020**. The project will start in March, 2020.

DEFINE
AI use-cases

DEVELOP
the solutions

SHARE
the results

Working Together

Objective:
1. Share international experience, challenges and know-how among participants
2. Develop and prioritise a list of practical problems

Scope:
1. A kick-start meeting/call will be conducted.
   - Participants are required to present their experience, challenges and know-how
   - Participants are required to identify themselves as
     - **Data provider;**
     - **Application developer; OR**
     - **Both**

2. After that, **Data provider** will be asked to provide their practical problems in detail and ONLY need to indicate what types of data that they can provide.

Outcomes:
1. One kick-off meeting (Call)
2. List of AI use-cases with detailed description

Duration:
- One month, i.e. March to April, 2020

DEFINE
AI use-cases

DEVELOP
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Working Together

Objective:
1. Form project team(s) to tackle the problems
2. **Application developer** tackles the problems and develops solutions.
3. **Data provider** reports the progress and evaluates the results.

Scope:
1. CLP and innogy will help summarizing the problems. **Application developer** will be asked to decide which problems that they are able to tackle.

2. Project team(s) will be formed by **Data provider** and **Application developer**. **Data provider** will ONLY provide data, if mutual acceptance is achieved.

3. In that case, **data provider** will acquire new techniques and skills from data scientists and will be able to solve their practical problems. Meanwhile, **application developer** can improve their experience and knowledge from subject matter experts and strengthen their skillsets.

4. CLP and innogy will help summarize the progress and report to IERE.

Outcomes:
1. Teams are formed to tackle the AI use-cases in stage 1
2. Teams develop solutions
3. Three meetings (2 calls and 1 meeting at Brisbane WS (in June):)

Duration:
- Six months, i.e. April to October, 2020

DEFINE
AI use-cases

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Working Together

Objective:
1. The **Application developer** and/or **Data provider** share their experience and present the results.

Scope:
1. A presentation is expected to be delivered to non-participating members at the IERE events. This is a chance for **Application developer** and/or **Data provider** to promote their capabilities and the possibility of providing data.

2. A close-door presentation is expected to be delivered among the participating members. CLP and innogy can help arranging the meeting.

Outcomes:
1. Presentation at IERE-CSIRO Brisbane Hydrogen Workshop (in June):
    1. AI use-cases with detailed description
    2. Teams Progress
    3. Invitation – TBC, subject to mutual agreement among the existing participants
2. Presentation at the 20th IERE General Meeting and Forum at Singapore (in November)
    1. Results sharing by participating companies

Duration:
- One month, i.e. October to November, 2020

DEFINE
AI use-cases

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Please join us

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