What is an ILO?

- ILOs: experts employed at the national ministries or research institutes to stimulate the collaboration amongst the national industry and the international RIs, providing advice on business opportunities, R&D collaborations, call for tenders and industrial services.
- Examples of RIs: CERN, ESS, ESRF, ESO, European XFEL, ILL, SKA, FAIR

Status and cooperation between ILOs and ESO

- "The role of the Industrial Liaison Officer (hereinafter referred to as ILO) is to **establish contacts between ESO and (potential) suppliers** and to **support ESO in its search for the different suitable suppliers in their respective country** in order to **maximize the chance to distribute the ESO contracts as fairly as possible amongst suppliers in the different MS**."
- Must have a broad network in the Member States Industry
- Interactions between ESO and ILOs:
  - Suggest suitable suppliers for procurements above 150 K EURO
  - Organise company presentations at ESO
  - Organise an industry day at a member state
  - Organise a member state day at ESO
  - One meeting per year
  - ESO: equal treatment to all ILOs

Distribution of ILOs across Europe (according to ENRIITC survey)

Answer Choices	Responses	Ratio (approx.)
Governmental Agency	18	36 %
Public Research Organisation	18	36 %
Research Infrastructures	3	6 %
Private commercial institution	2	4 %
Private not-for-profit Association	9	18 %

The ILO-net in the Netherlands; an example from the science perspective

- The ILO-net (appr. 10 people) was founded around 2010 to share resources and expertise, and jointly organize the dialogue between science and industry
- Since 2012 the Dutch research organization NWO has been supporting the ILO-net;
  - for science to get better access to high-tech Dutch companies,
  - for SMEs to get closer involved in Big Science projects,
  - to profile Dutch companies to acquire important contracts,
  - to enable industry to engage in high tech activities (high risk)

"ILOs" in the NL have been active since the engagement in Big Science; ESO, ESA, CERN, ITER

Bottom-up approach; the activity originated at the research institutes that are the home base of Ris

ILOs are not officially recognized; and there is no official job description

Different perspectives

From the ILO-net perspective, the following (leading) principles apply,

- ***(Big) Science needs industry, but industry doesn't necessarily need science***

  (notion of Brussels workshop leading to first Position Paper about the barriers that are experienced by SME to enter the BS market, 2018)
- ***There is no applied science if there is no science to apply***

  ((Big) science should be part of an ecosystem; second Position Paper, 2020)

From the institutes' perspective;

"increase availability of companies for co-development and valorization"

From the more general national (economic) perspective;

"increase georeturn, stimulate innovation"

NWO acknowledges the ILO-net as an important tool for "valorisation"

ILO individual competences

- Specific (technical) expertise and capabilities to connect science and industry
- Exchange information, experience and knowledge with new/other ILOs, on international level
- Knowledge about procurement rules (in-kind, best value for money, alignment, fair return, leveled playing fields…..)
- Acknowledged and trusted liaison between science and industry

Distinctive roles

- Raising georeturn from Big Science
- Promote co-development between science and industry
- Promote spin-off and spin-in (knowledge transfer)

Different balance at the institutes; at the level of the joint ILO-network activities it creates cross-fertilization and added value.

Activities

- Industrial participations at (inter)national conferences to connect science with industry
- Company brochure (> 200 companies and growing) and website (www.bigscience.nl)
- Dialogue (at operational level) with stakeholders to make the connections in the innovation chain
- Two Position Papers issued in 2018 and 2020 (see website; bigscience.nl)
- Partner in H2020 project ENRIITC, member of the PERIIA board, participation in BSBF

Ambitions

- Act as a knowledge base for (international) procurement
- Support the development of science-technology combinations, on the basis of KETs that apply for (big) science
- Act as a national base in a European ILO-Network
- Be available as centre of expertise for the implementation of the national roadmap for large scientific infrastructures
- Acquire a better embedding in an “ecosystem” for Big Science in the Netherlands
- Help to improve the position of research institutes as a home base for Big Science
- Arrange for better funding and support opportunities related to high risk/low TRL PPP’s

Different Approaches to the ILO role

- Governmental agencies (ministries) tend to focus on the “downstream” part of the innovation chain; driven by societal challenges, georeturn and clear business cases
- Research institutes are driven by science cases, and need new key enabling technologies to push frontiers; they have a prime focus on the “upstream” part of the innovation chain