



Generating and demonstrating impact

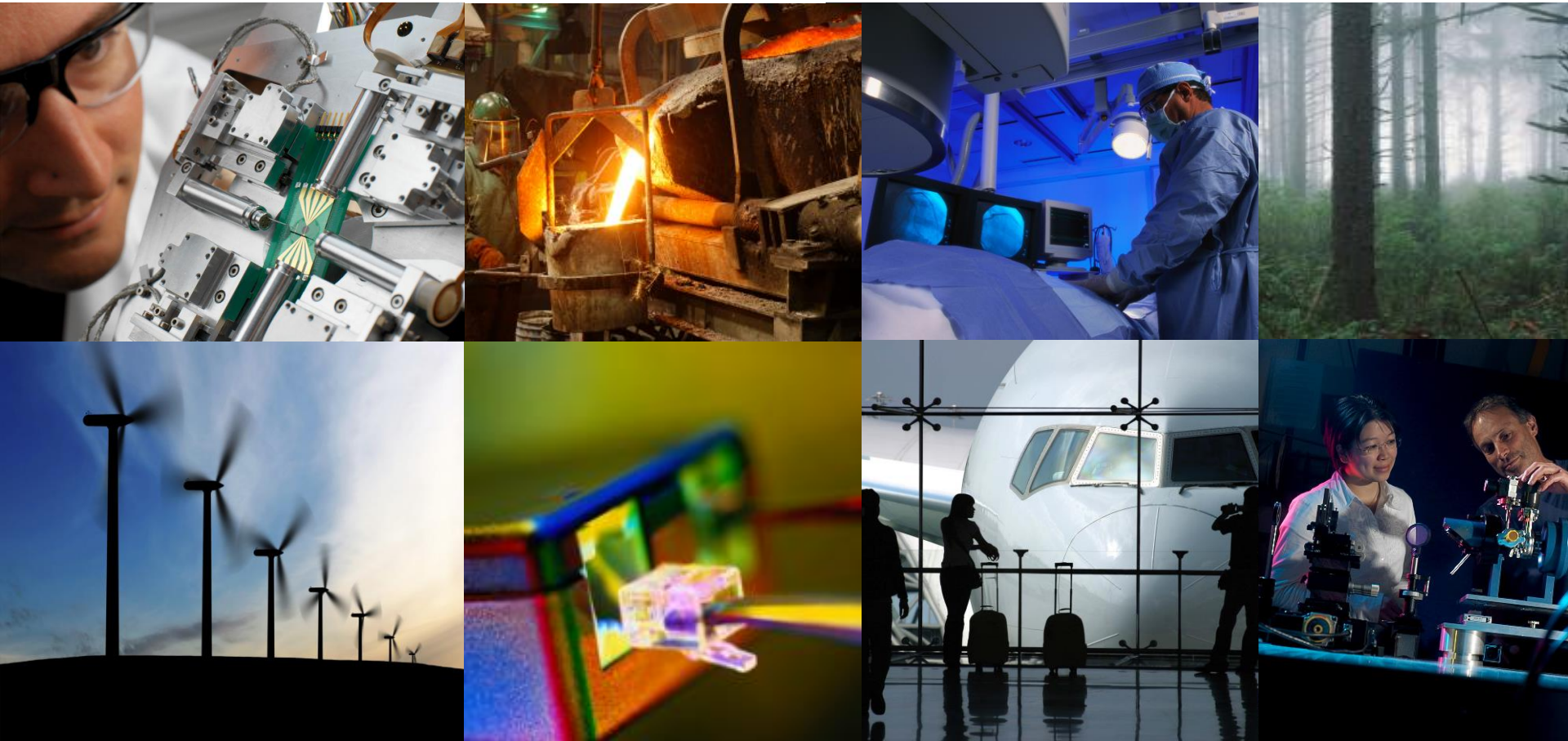
Paula Knee
EURAMET MSU Impact Officer
22 June 2016

Agenda



10.15	<i>Welcome and introduction</i>	
10.25	Generating Impact – what impact is and why it is important	Paula Knee EURAMET Impact Manager
	Sharing experience	
10.45	Working with industry	Andrew Lewis Coordinator of IND53
11.15	<i>Coffee</i>	
11.30	Working with standards bodies: CEN and ISO	Eveline Domini EURAMET / LNE
12.00	Q&A	
12.15	Designing and delivering impact workpackages	Glenis Tellett Impact Manager, NPL
12.45	<i>Lunch</i>	
13.30	Developing impact workpackages	
	Tutorial session: delegates will design content of an impact workpackage with support from the speakers	Paula Knee Glenis Tellett Eveline Domini Andrew Lewis
16.00	Close	

Metrology is all about impact



€1 billion

Together EMRP and EMPIR amount to

€1 billion

of public funding
for metrology research

EURAMET is required by the Commission to

- Provide evidence of **impact** to support the external programme evaluations **in 2017**
 - Final evaluation of EMRP
 - Mid-term evaluation of EMPIR
- And later the final evaluation of EMPIR in Dec 2024
- Provide annual data on EMRP and EMPIR **outputs**

Impact for EMPR & EMPIR



**FP7 / H2020
Objectives**

European growth and jobs
Respond to societal challenges
Create an integrated European Research Area

**EMRP/ EMPIR
Specific
Objectives**

- **Boost industrial uptake of metrology research** supporting development of **new & improved products and services**
- **Improve standardisation / regulation**
- Underpin a coherent, sustainable and **integrated European metrology landscape**

Impact for EMPR & EMPIR



**FP7 / H2020
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**EMRP/ EMPIR
Specific
Objectives**

At least €400m of European turnover from new or significantly improved products and services that can be attributed to the research activities of EMPIR and its predecessors

What impact is for us



NEED

High level societal need

e.g. mitigating climate change
Industrial competitiveness

User needs

e.g. product development
Improved processes control
Compliance with regulation

Specific measurement needs

Specific factors cannot be measured
Errors in field measurements too high
No traceable measurements available

Project specific scientific and technical objectives

- Improve accuracy of measurement X in the field
- Develop new primary standards/ traceability in measurement of Y
- Extend NMI measurement capabilities to range Z

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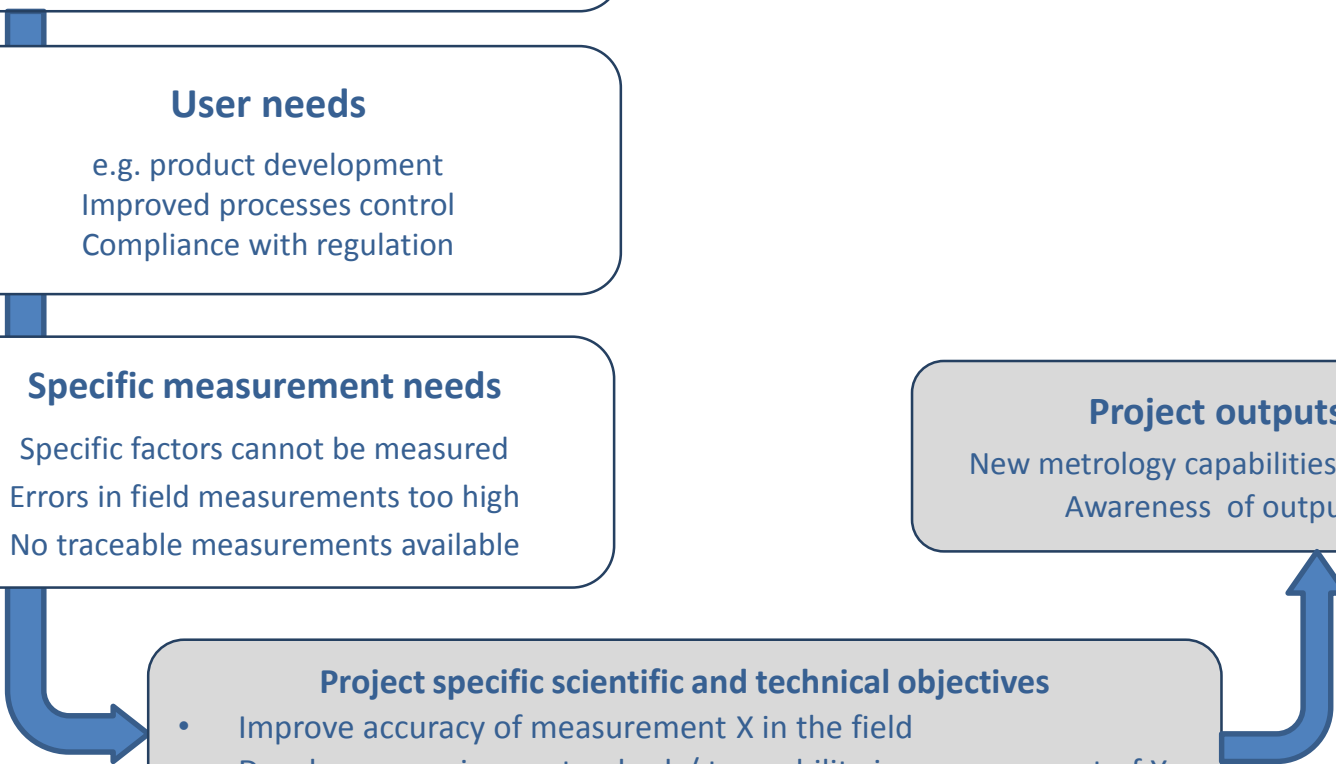
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Project outputs

New metrology capabilities available
Awareness of outputs



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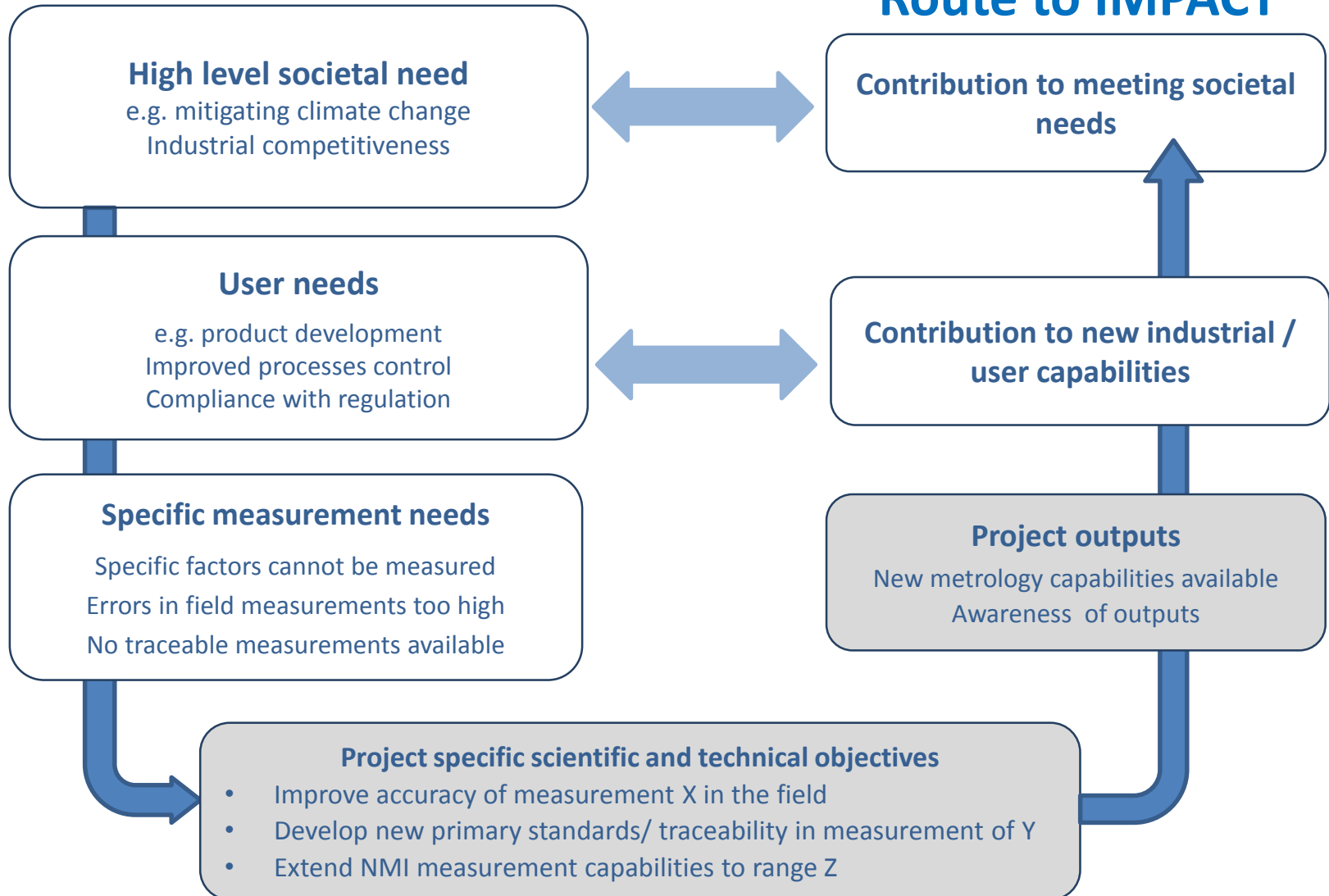
Route to IMPACT

Contribution to meeting societal needs

Contribution to new industrial / user capabilities

Project outputs

New metrology capabilities available
Awareness of outputs



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Route to IMPACT

Contribution to meeting societal needs

Contribution to new industrial /
user capabilities

Early impacts

- User uptake of outputs
- New /improved standards

Project outputs

New metrology capabilities available
Awareness of outputs

Project specific scientific and technical objectives

- Improve accuracy of measurement X in the field
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Examples of early impacts



Outputs

Technical outputs

New / improved measurement capabilities / facilities at NMIs/DIs

New / improved knowledge, methods, protocols, techniques, artefacts

Intellectual property

Dissemination outputs

Scientific papers , presentations, reports, guides

Contributions to standards committees & working groups

Newsletters, website, media, events

Trained personnel in NMIs/DIs and among users

Outputs and early impacts



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Early impacts

Uptake of project outputs by private & public sector

Calibrations & consultancy based on new capabilities

New accreditations in traceability chain

Uptake / commercialisation of new tools / techniques / methods

Further industrial R&D

IP exploitation

Tangible influence standards & regulation

Approved or draft standards

New WGs/ NWIP with strong metrology focus

Scientific impact: citations / collaborations with research community

Integration: Sustained and deepened networks and collaborations among NMI/DIs

Outputs and early impacts



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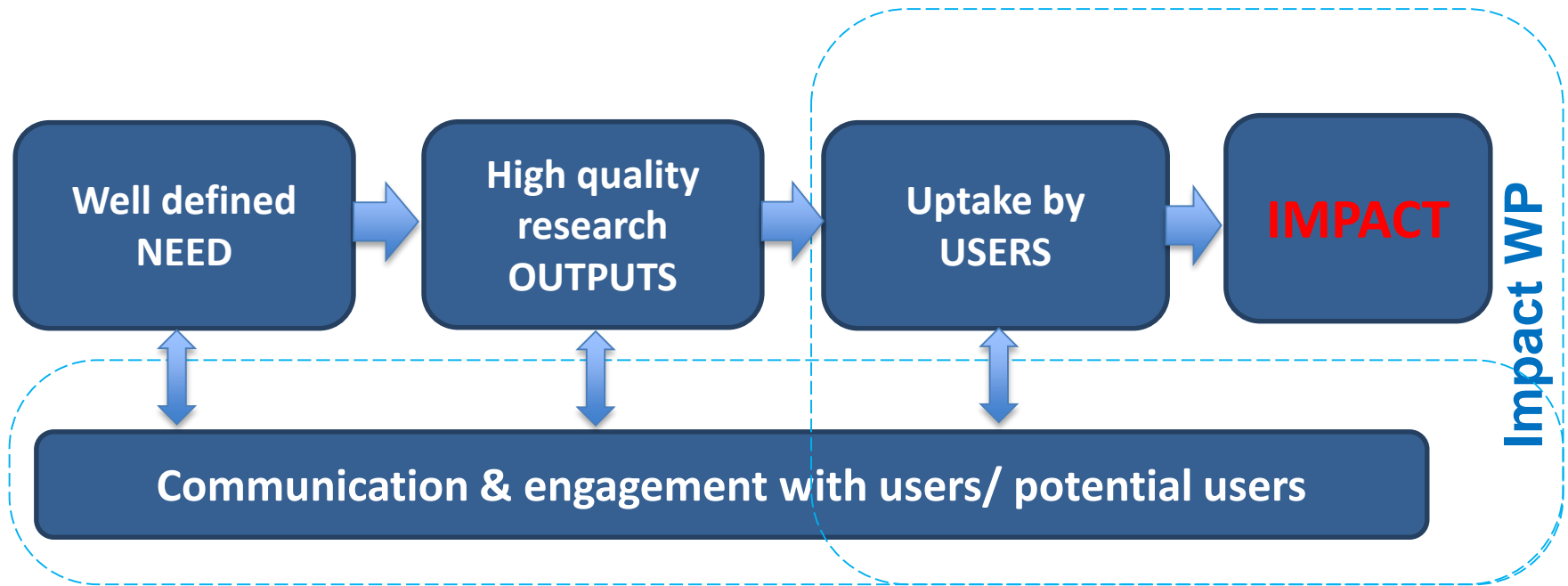
Integration: Sustained and deepened networks and collaborations among NMI/DIs

Sales of innovative products

New / updated standards

Metrology integration / coordination

Project design: need→impact



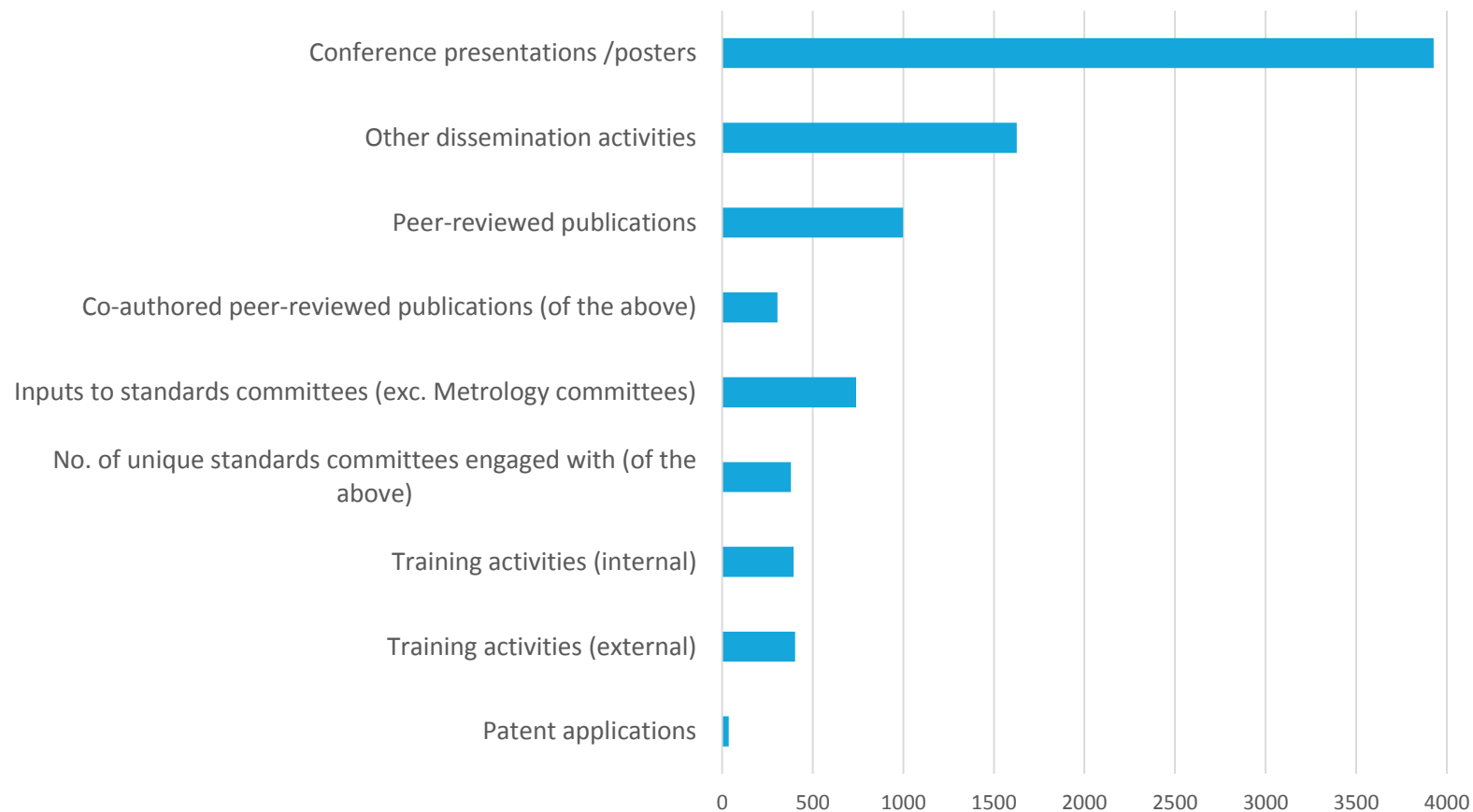
Demonstrating impact



Recognise and report impacts

- **Output and Impact Report**
 - Enables reporting of outputs at programme level (*all worksheets*)
 - Provides information to identify **impact case studies** (*uptake worksheet*)
 - Provides **contacts for annual surveys** (collaborators & stakeholders) and permission to contact them
 - Data for bibliometrics
- **Final Publishable Reports**
 - Demonstrate the value of your project to the funding bodies

EMRP outputs



Impact reports



European Metrology
Research Programme



Energy impact report

A summary of the outputs and impact of the finished EMRP joint research projects in Energy.

The aim of this theme is to establish the measurement infrastructure necessary to support Europe's sustainable energy goals. The research is focused on technologies that support reduced greenhouse gas emissions and the security of Europe's energy supply.

EURAMET e.V. - the European Association of National Metrology Institutes

DRAFT

European Metrology
Research Programme



Environment impact report

A summary of the outputs and impact of the finished EMRP joint research projects in Environment.

The aim of this theme is to improve data quality for environmental policy making, underpin environmental research activities and stimulate technological innovation. The research is focused at both the local environmental level for air, water and soil quality and at the global level for challenges relating to climate change

EURAMET e.V. - the European Association of National Metrology Institutes

Impact data: Industry



INDUSTRY (2010 CALL)	Evidence (to date)
Total investment in IND 2010 (17 projects)	€53.7M
Economic impact data	
Sales of innovative products & services attributable to the EMRP projects	€30M tbc
Economic impact case studies (being drafted)	20
Social impact data	
Inputs to draft or published standards & regulations (via 95 contributions to 47 committees /subcommittees)	19
Social impact case studies (being drafted)	5

Impact case studies



European Metrology
Research Programme
Delivering Impact



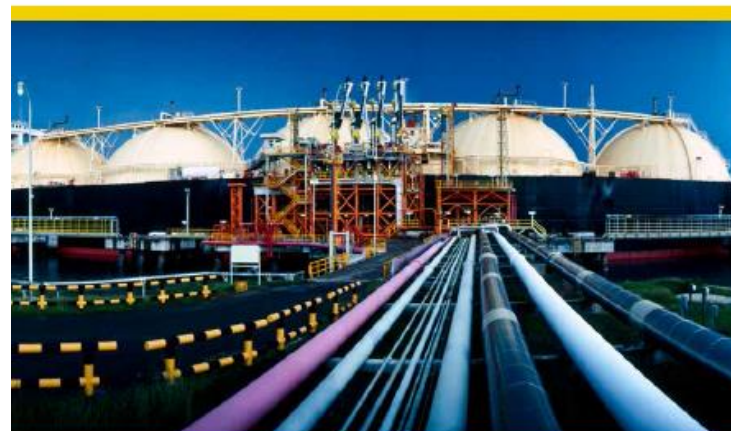
Future-proofing Europe's gas networks

Europe's renewable energy targets and diminishing natural gas resources require the diversification of energy sources to include non-conventional gases, such as biogas and methane. These gases have different chemical and physical properties to traditional natural gas and need to be well-characterised before entering the gas transmission networks and during 'custody transfer' between different commercial operators. This is crucial to ensuring safe operation and enabling fair trade and environmental decision-making.

Europe's National Measurement Institutes working together

The European Metrology Research Programme (EMRP) brings together National Measurement Institutes in 23 countries to address key measurement challenges at a European level. It supports collaborative research to ensure that measurement science meets the future needs of industry and wider society.

European Metrology
Research Programme
Delivering Impact



Diversifying Europe's energy supply

The recent increase in energy prices and instability of pipeline gas imports over the past few years have heightened concerns about the security, diversity, and competitiveness of Europe's natural gas supply. Coupled to this, alternative fuels are urgently needed to break the over-dependence of European transport on oil. Liquefied natural gas (LNG) could play a major role in diversifying Europe's energy supply and securing a stable, greener future.

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Early impact examples



Improving efficiency of traditional power plants

- Improved calibrations for ultrasonic flowmeters supported innovative use of power plant flow meters for both flow and temperature
- Installed in first plant
- Estimate implementation would result in power plant efficiency improvements of 2-3%

Dynamic measurements for process control

- Company has developed improved instrumentation for measuring dynamic pressure
- Two patent applications based on the technology
- Sales projected in sectors such as semi-conductor manufacturing to increase process efficiency

Supporting instrumentation innovation in emissions measurement

- Traceable measurements of particulate measurement instrumentation – leading to improved instrumentation for type approval of new efficient diesel engines and on-the road testing
- Protocol for testing micro-sensors – being used by SME to develop innovative small, cheap micro-sensors for roadside NO₂ monitoring

Thank you

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