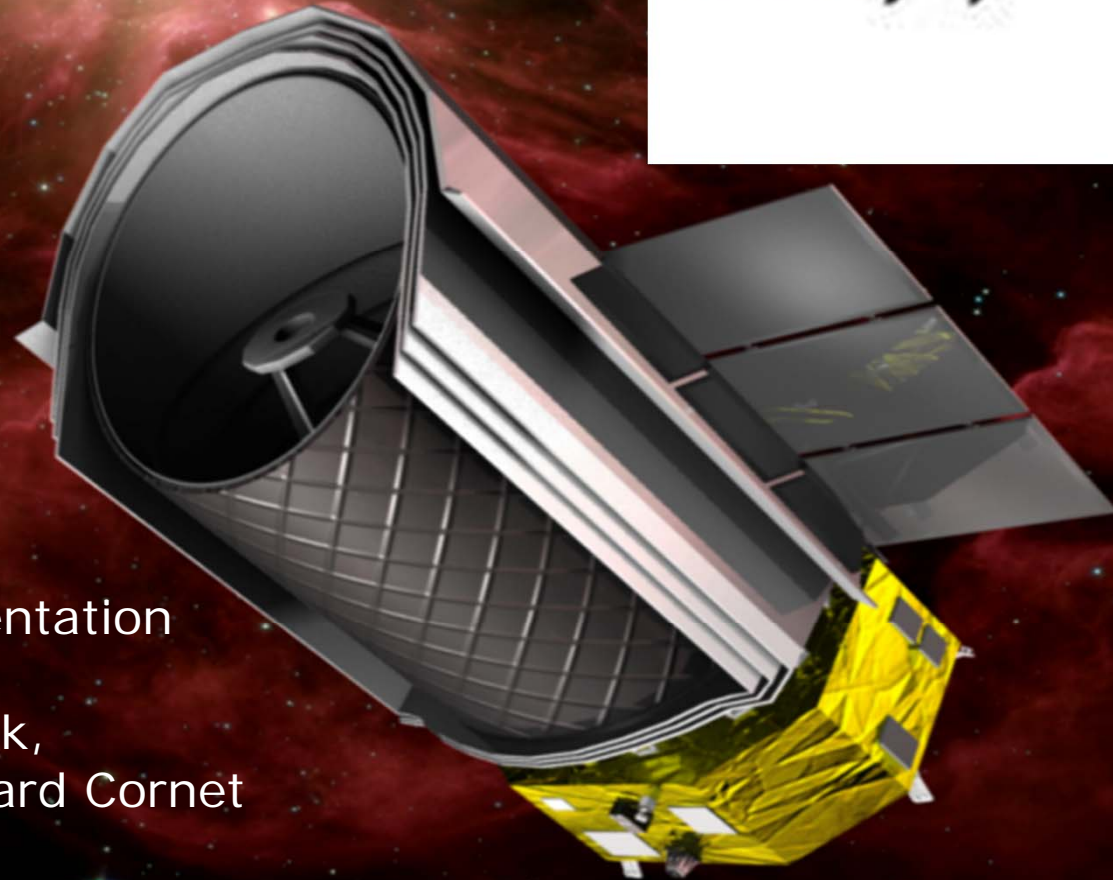


SRON

Netherlands Institute for Space Research

The logo for the Netherlands Organisation for Scientific Research (NWO). It features the letters 'NWO' in a stylized font. The 'N' and 'O' are red, while the 'W' is black. A red swoosh is positioned above the 'W'.

Advanced Instrumentation

Hans van Gageldonk,
Henk Hoovers, Gerard Cornet

10 Oktober 2012

Agenda


- Wat is Advanced Instrumentation?
- Hoe past Advanced Instrumentation in de keten van fundamenteel onderzoek naar de markt?
- Hoe wordt Advanced Instrumentation ingebed in de Topsectoren (specifiek in HTSM)?
- Hoe willen we Advanced Instrumentation verder brengen?
 - Kennistafels

Advanced Instrumentation

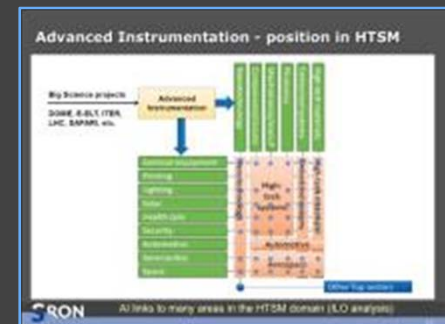
Advanced Instrumentation bundelt activiteiten binnen NWO instellingen en (MKB) industrie om wetenschappelijk gedreven, complexe instrumenten te realiseren in het kader van "Big Science".

Het doel van Advanced Instrumentation is om vanuit een wetenschappelijk / inhoudelijk perspectief duurzame technologie-markt ketens op te bouwen.

Advanced Instrumentation wordt ingebed in de Topsectoren (en specifiek in HTSM).



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Advanced Instrumentation – kennistafels - Topics

Kennistafels (to identify technology-market combinations) are planned for November 2012, to be organized and overseen by NWO's Industrial Liaison Officers.

Focus areas in Advanced Instrumentation
Optical instrumentation
Sensor system technology
Precision technology
Customized micro-electronics
XCT infra-structures and massive data processing

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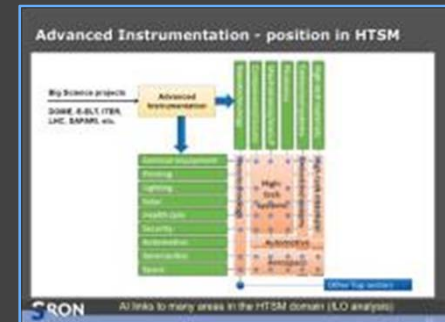
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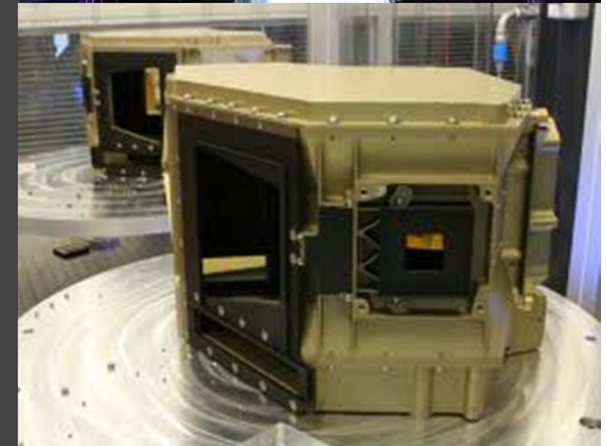
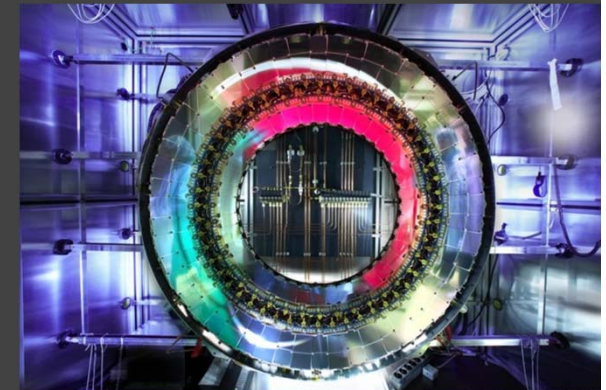
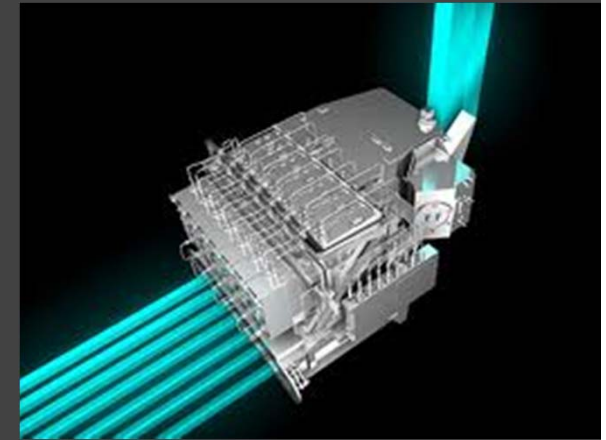
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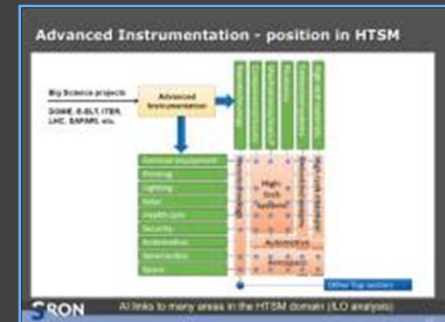
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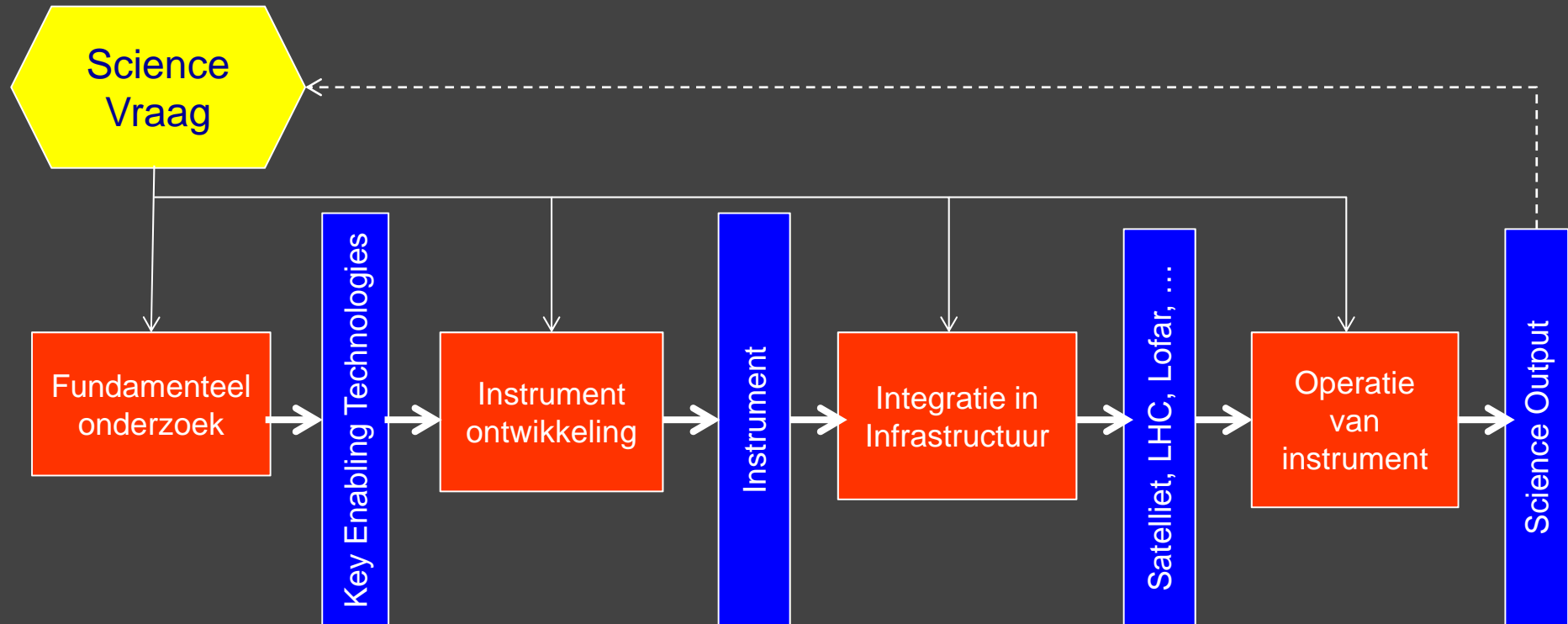
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Focus areas in Advanced Instrumentation

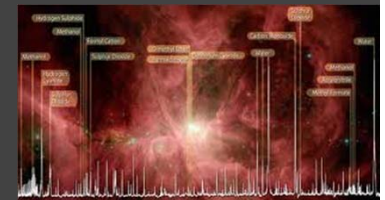
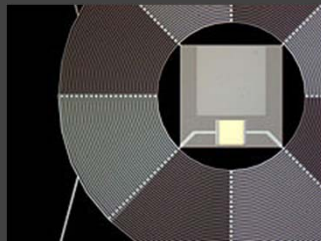
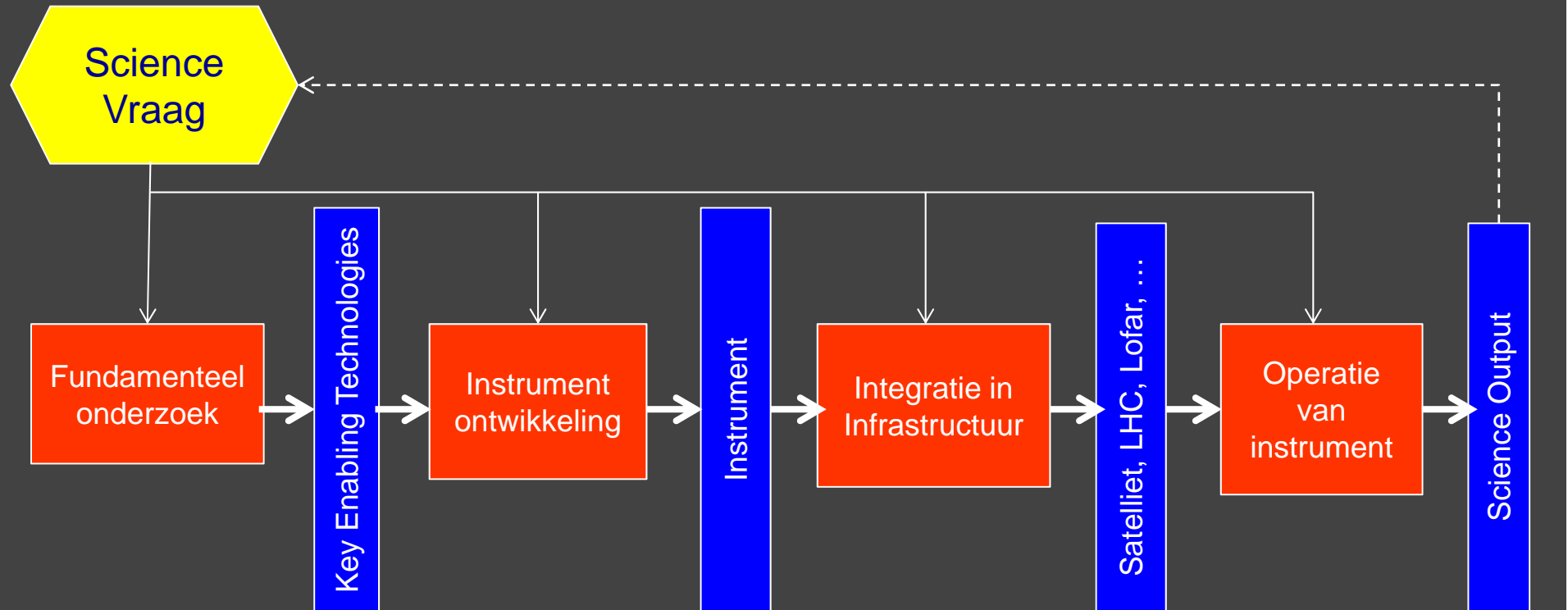
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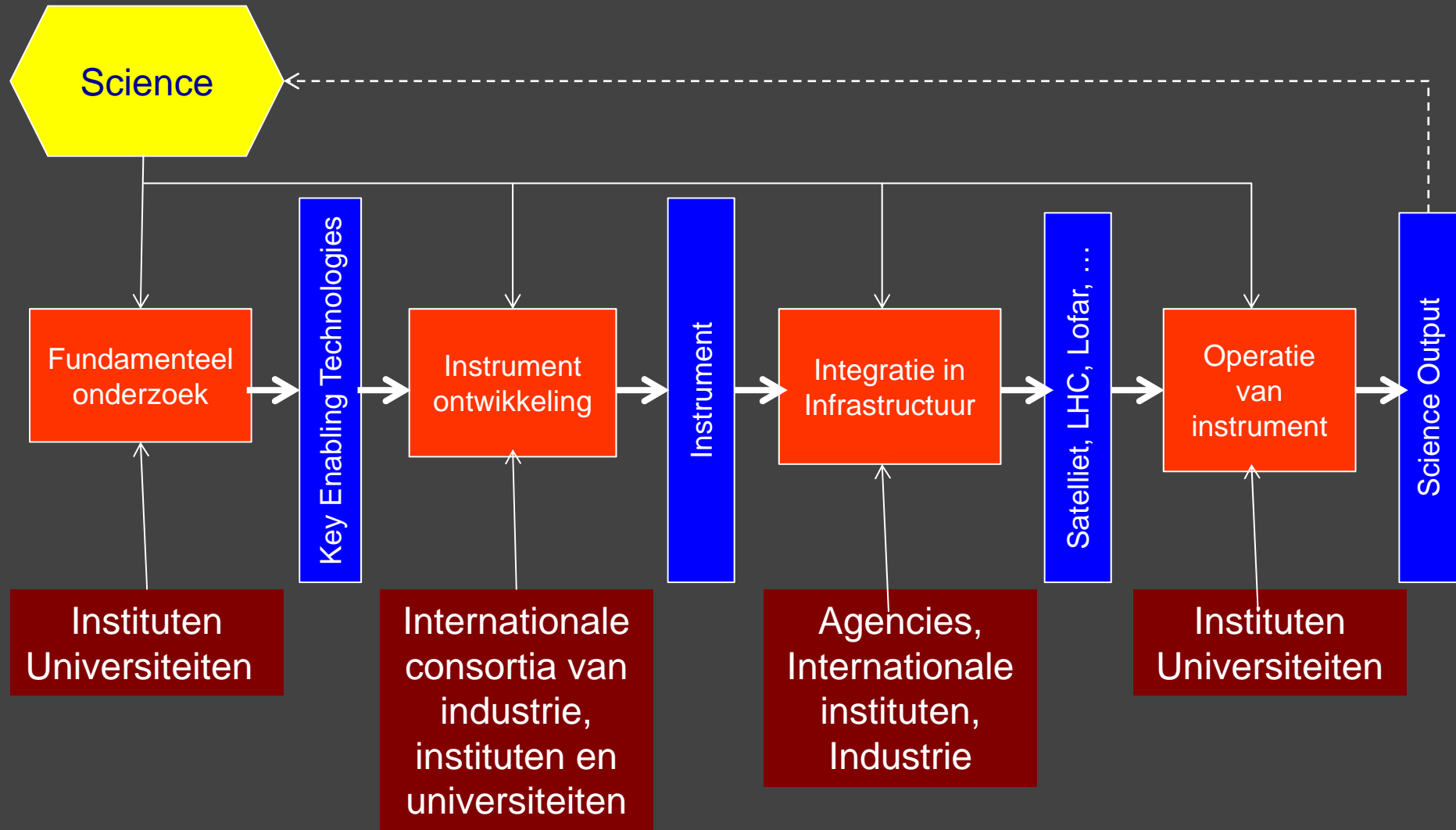
Innovatie Ketens in Advanced Instrumentation



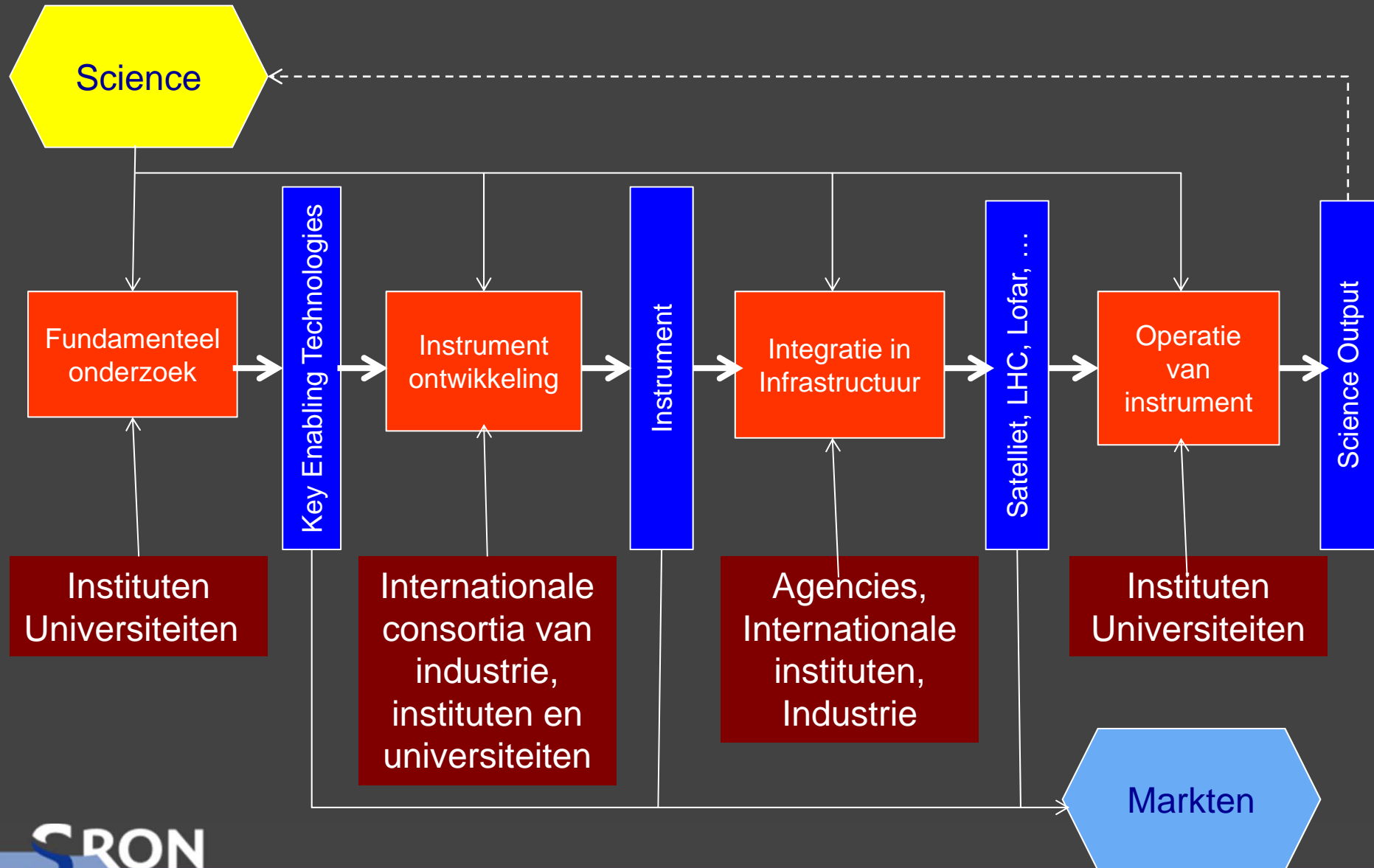
Advanced Instrumentation: Herschel HIFI als vb.



Innovatie Ketens in Advanced Instrumentation



Innovatie Ketens in Advanced Instrumentation



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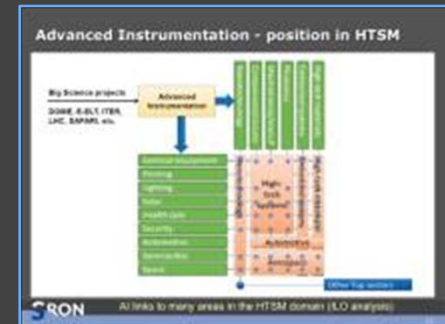
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Advanced Instrumentation - outline

Advanced Instrumentation is put forward by NWO and its institutes AMOLF, ASTRON, CWI, NCSR, Nikhef, NIOZ, SRON

Focus: 'Big Science'

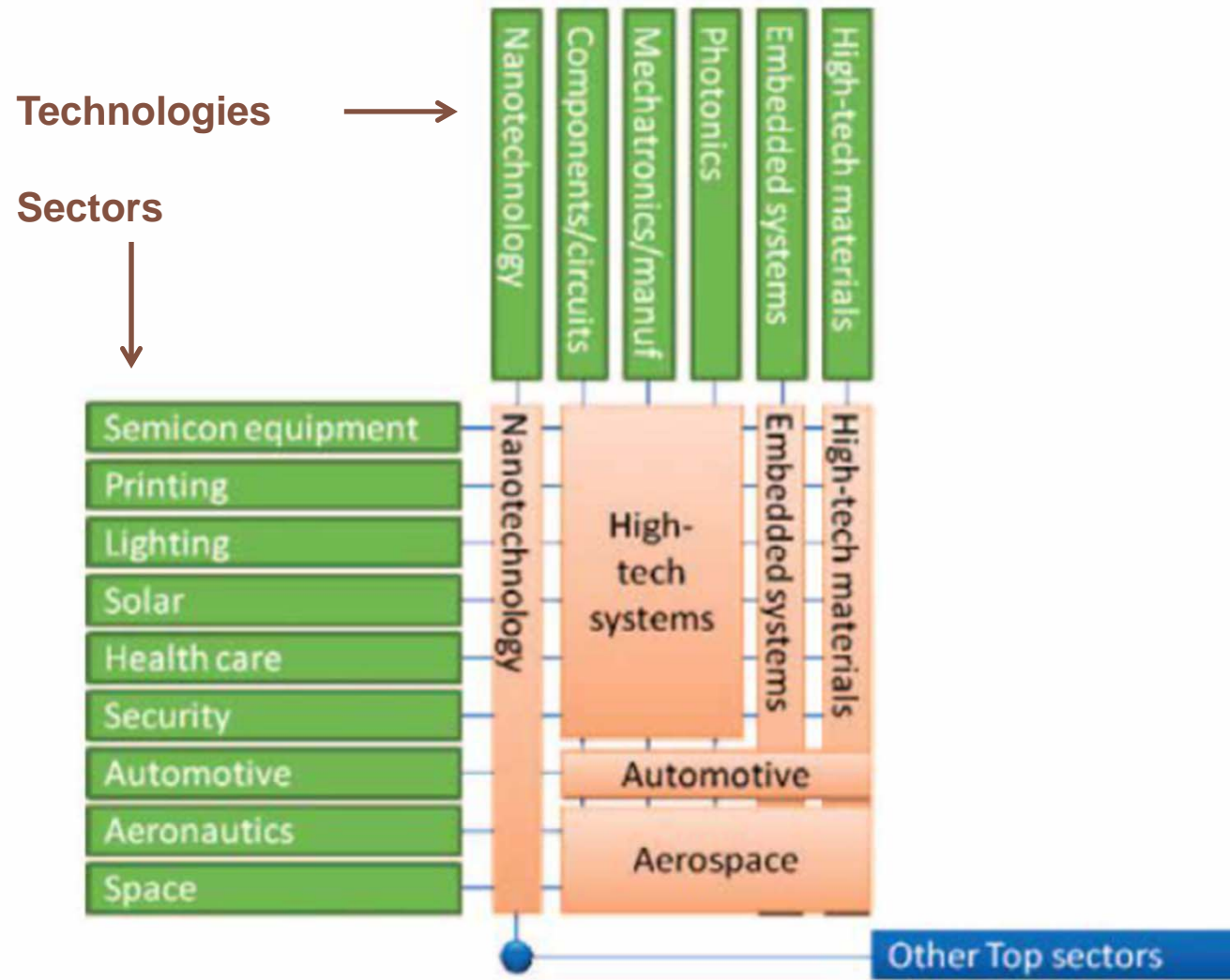
Large R&D projects in the context of ESA, ESO, CERN, ITER, EC-research agenda

Advanced Instrumentation in short

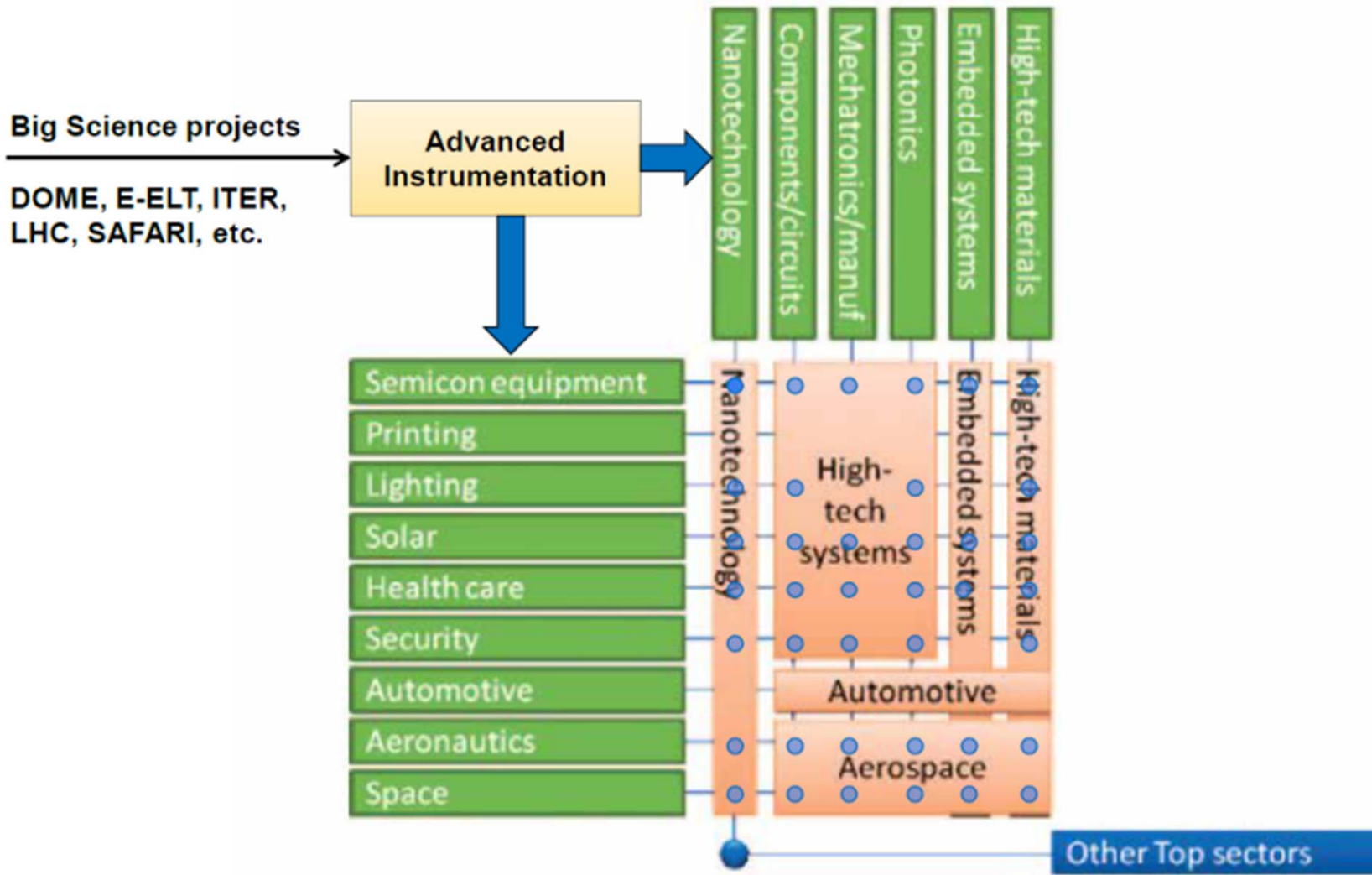
- Scientifically motivated work at the limits of the technology
- A high level of fundamental research, links to the 'key enabling technologies' (EC)
- NWO institutes lead the complex, large scale, research projects (development phases and operations)
- The projects are in an international context and in collaboration with industry
- Advanced Instrumentation employs a network of highly innovative SMEs; the Industrial Liaison Officers in the institutes are the interface to industry
- Advanced Instrumentation links to many areas in the HTSM-domain

Advanced Instrumentation - position in HTSM

HTSM – present



Advanced Instrumentation - position in HTSM



Advanced Instrumentation - focus areas

'Big Science: from measurement to analysis'

Focus areas in Adv Instrum	NWO (lead)
Optical instrumentation	<u>DIFFER</u> , AMOLF, ASTRON, Nikhef, SRON
Sensor system technology	<u>Nikhef</u> , <u>SRON</u> , ASTRON, DIFFER, NIOZ
Precision technology	<u>DIFFER</u> , <u>SRON</u> , NIOZ, Nikhef
Customized micro-electronics	<u>ASTRON</u> , DIFFER, NIOZ, SRON, Nikhef
ICT infra structures and massive data processing	<u>CWI</u> , <u>Nikhef</u> , NCSR, ASTRON, NIOZ

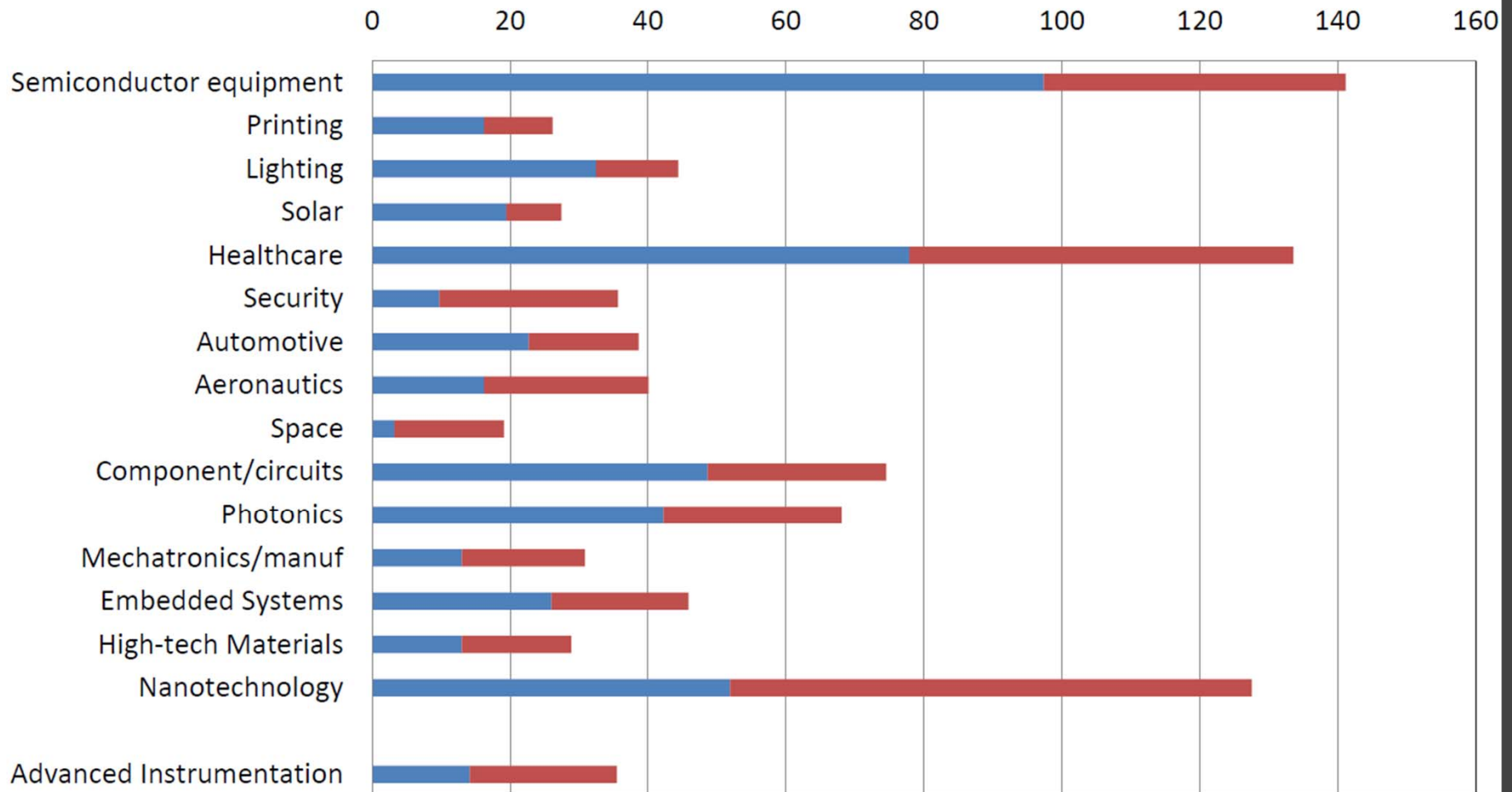
Advanced Instrumentation aims to initiate sustainable (durable, lasting) technology-market combinations by combining forces of scientific and industrial partners by means of 'kennistafels' organized by the ILOs

The knowledge chains that are to be developed from the focus areas

- are high tech
- have a high innovative impact
- having a long time-to-market

Advanced Instrumentation - prospect

HTSM roadmaps 2013 including Advanced Instrumentation (million Euro; indicative numbers)



Advanced Instrumentation – industrial network

A first survey of the industrial network related to Advanced Instrumentation yields 120 potential partners

Within HTSM, only Semicon, Healthcare, Photonics and Nanotechnology have a network of more than 100 partners (the other 11 roadmaps have ~50 partners)

Advanced Instrumentation Status and developments

Advanced Instrumentation is currently not a part of the Topsector High Tech Systems and Materials

However, NWO-triggered discussions are now taking place with the relevant persons and organizations to explore a possible future position within HTSM

The outcome of these discussions is expected within ~ one month

The outcome of the kennistafels (i.e. the possible technology-market combinations) is an essential step in the process to develop Advanced Instrumentation as a new area in HTSM

Advanced Instrumentation – kennistafels - Topics

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NWO institute	ILO
AMOLF	Bart Leijen
ASTRON	Ronald Halfwerk
CWI	Dick Broekhuis
DIFFER	Toon Verhoeven
NCSR	Stijn Ruiten
Nikhef	Rob Klöpping
NIOZ	Marck Smit
SRON	Gerard Cornet
NWO	Patricia Vogel

Dank voor de aandacht

Vragen?

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