Sweden (SE)

Sweden's national initiatives and strategies for digitising industry are:

- *Smart Industry[1]:* This strategy is part of the "Smart Industry Action Plan" which presents actions in several policy areas that support the work of "Smart industry" in the form of ongoing efforts. The measures have been prepared after a dialogue process with the social partners, companies and academia.
- *Produktion 2030[2]:* a strategic innovation program supported by VINNOVA, Energy Agency and Formas. The goal is to ensure that Sweden continues to be a competitive country of production.
- Pilot factories and testbeds: *Testbed Sweden (Testbädd Sverige)[3]* is an initiative that was launched in January 2016. In June 2017, Produktion2030 launched a call for test bed projects for digitization in the manufacturing industry. The projects will utilize existing testing environments for testing new production methods and production technologies/systems.

On a **national level** Sweden has *12 Digital Innovation Hubs* (3 fully operational and 9 preparation status) covering various market domains (agriculture, fishing, construction, manufacturing (food products, textiles, chemicals, basic and fabricated metal products, electrical and optical equipment, machinery, electrical equipment), transport, electricity, public administration, education and health) through a large spectrum of technology areas presented as follows:

- Additive manufacturing (3D printing)
- Advanced or High-performance computing
- Artificial Intelligence and cognitive systems
- Augmented and virtual reality, visualization
- Broadband and other communication networks (e.g. 5G)
- Cloud computing
- Cyber security (including biometrics)
- Data mining, big data, database management
- Gamification
- ICT management, logistics and business systems
- Interaction technologies (e.g. human-machine Interaction, motion recognition and language technologies)
- Internet of Things (e.g. connected devices, sensors and actuators networks)
- Internet services (e.g. web development, web production, design, networking, and e-commerce)
- Location based technologies (e.g. GPS, GIS, in-house localization)
- Micro and nano electronics, smart system integration
- New Media technologies
- Photonics, electronic and optical functional materials
- Organic and Large Area Electronics (OLAE)
- Robotics and autonomous systems
- Screens and display technologies
- Sensors, actuators, MEMS, NEMS, RF

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[1] Smart Industry, http://www.government.se/information-material/2016/04/smart-industry---a-strategy-for-new-industrialisation-for-sweden/

[2] Produktion 2030, http://www.produktion2030.se/

[3] Testbed Sweden, https://www.vinnova.se/en/m/testbed-sweden/testbeds-in-sweden/

- Simulation and modelling
- Software as a service and service architectures

On a **regional level**, each hub's activities seem to be aligned with the RIS3 strategies. A concise list of all hubs on national and regional level is presented as follows:

1. Fully operational DIHs

Hub name	City	NUTS2 region	Country	Smart Specialisation (SS)	Link to SS	AI	HPC	Cyber Security	Association to EU-funded project
Infrastructure and Cloud data centre test Environment (SICS ICE)	Luleå	Övre Norrland	Sweden	Bid data, cloud computing	-	X	X	-	I4MS (MIDIH), SAE (EuroCPS)
Stena Industry Innovation Hub at Chalmers - SII-Hub	Goteborg	Västsverige	Sweden	General innovation	-	X	-	X	SAE (TETRAMAX), I4MS (I4MS-Growth)
Urban ICT Arena	Kista	Stockholm	Sweden	ICT	ICT and Digitalisation	X	-	X	-

2. In preparation DIHs

Hub name	City	NUTS2 region	Country
Arctic Game Lab	Skelleftea	Övre Norrland	Sweden
Blue Science Park	Karlskrona	Sydsverige	Sweden
Bron Innovation	Sundsvall	Mellersta Norrland	Sweden
EIT Digital Sweden	Kista (Sweden)	Stockholm	Sweden
Mobile Heights / Skåne EDIH	Lund	Sydsverige	Sweden
Powertrain Manufacturing for Heavy Vehicle Application Lab	Stockholm	Stockholm	Sweden
RISE ICT Research Institute of Sweden ICT	Kista	Stockholm	Sweden
Robotdalen	Västerås	Östra Mellansverige	Sweden
The KTH Innovation Hub of Digital Industrialization	Stockholm	Stockholm	Sweden

3. RTOs/universities that had a DIH role in an EU project

A list of RTOs/universities that have participated in the EU FP7 and H2020 projects, and *are not mentioned above*, is presented in the following tables:

a. H2020 participation[4]

Project Topic Code	Project Acronym	Project Duration	Project End Date	Participant Legal Name	Participant Role	Participant Short Name	Core Legal Entity Type	Research Organisation	Project Topic Code
FoF-09-2015	Fortissimo 2	36	31/10/2018	KOENIGSEGG AUTOMOTIVE AB	PARTICIPANT	KOENIGSEGG	PRIVATE	No	FoF-09-2015
FoF-09-2015	Fortissimo 2	36	31/10/2018	GRIDCORE AB	PARTICIPANT	GOMPUTE	PRIVATE	No	FoF-09-2015
FOF-12-2017	MIDIH	36	30/09/2020	LULEA TEKNISKA UNIVERSITET	PARTICIPANT	LTU	PUBLIC	Yes	FOF-12-2017
FOF-12-2017	CloudiFacturing	42	31/03/2021	LUNDS UNIVERSITET	PARTICIPANT	LU	PUBLIC	Yes	FOF-12-2017
Project Topic Code	**Project Acronym**	**Project Duration**	**Project End Date**	**Participant Legal Name**	**Participant Role**	**Participant Short Name**	**Core Legal Entity Type**	**Research Organisation**	**Project Topic Code**
ICT-01-2014	EuroCPS	36	31/01/2018	LULEA TEKNISKA UNIVERSITET	PARTICIPANT	LTU	PUBLIC	Yes	ICT-01-2014
ICT-02-2014	SMARTER-SI	36	31/01/2018	SWEREA IVF AB	PARTICIPANT	IVF	PRIVATE	Yes	ICT-02-2014

b. FP7 participation[4]

Project Number	Project Acronym	Project Duration	Project Start Date	Project End Date	Project Number of Participants	Participant Short Name	Participant Legal Name	Participant Role	Organisation Type
609029	FORTISSIMO	42	01-Jul-2013	31-Dec-2016	123	GOMPUTE	GRIDCORE AB	Participant	PRC
609029	FORTISSIMO	42	01-Jul-2013	31-Dec-2016	123	KOENIGSEGG	KOENIGSEGG AUTOMOTIVE AB	Participant	PRC
609046	LASHARE	48	01-Sep-2013	31-Aug-2017	69	GKN	GKN AEROSPACE SWEDEN AB	Participant	PRC
609046	LASHARE	48	01-Sep-2013	31-Aug-2017	69	OPT	Optoskand AB	Participant	PRC
609046	LASHARE	48	01-Sep-2013	31-Aug-2017	69	Perma	PERMANOVA LASERSYSTEM AKTIEBOLAG	Participant	PRC
609029	FORTISSIMO	42	01-Jul-2013	31-Dec-2016	123	GOMPUTE	GRIDCORE AB	Participant	PRC

4. Regions in Sweden that have no DIHs

- Mellersta Norrland
- Norra Mellansverige
- Småland med öarna
- Sydsverige