



SmartAnythingEverywhere



European Initiative
Smart Anything Everywhere



WP2 - Collaboration within the SAE Initiative

Common Reference for collaboration



Smart4Europe2 has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 872111.



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Highlight, challenges and pressing issues

- DIH network cohesion
- SAE capability map
- Major stakeholders
- Lessons learnt
- Outreach



DIHs network cohesion



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PHASE 1				PHASE 2				PHASE 3						
Gateone	Smarter-SI	EuroCPS	CPSE-Labs	DIATOMIC	FED4SAE	TETRAMAX	SmartEEs	BOWI	DIGIFED	DIH4CPS	HUBCAP	SMART4ALL	SmartEEs2	
SSI	SSI	CPS	CPS	SSI	CPS	CLEC for CPS/IoT	OLAE	X	CPS	CPS	CPS	CLEC for CPS/IoT	FWE	
	H/H	H/L	H/H	No/No	H/H	No/L	H/H	No/L	H/L	No/	No/No	No/No	H/H	Gateone
		H/L	H/L	H/No	H/H	H/L	H/H	H/No	H/No	H/	H/No	H/No	H/L	Smarter-SI
				No/No	H/H	No/L	L/H	No/No	L/L	No/	No/L	No/L	No/L	EuroCPS
				No/No	H/H	No/L	L/L	No/No	H/No	No/	H/H	No/No	L/L	CPSE-Labs
					L/L	L/H	L/L	No/L	No/No	No/	H/No	L/L	L/L	DIATOMIC
						L/H	H/H	L/No	H/H	L/	L/L	L/L	H/H	FED4SAE
							H/L	L/H	L/No	L/	L/No	L/H	L/L	TETRAMAX
								L/H	H/H	No/	No/No	No/No	H/H	SmartEEs
									L/No	No/	L/No	H/No	H/L	BOWI
										No/	L/No	No/No	H/H	DIGIFED
											/No	/No	/L	DIH4CPS
												No/No	No/No	HUBCAP
													No/No	SMART4ALL
														SmartEEs2

COHESION (H/H; H/L; L/H)

LOW COHESION (L/L)

NO COHESION (L/No; No/L; No/No)

UNCLEAR (Mismatch)

Lower cohesion within Phase 3 / new IA entrants / one cross-cutting IA



DIH Stakeholders



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		PHASE 1					PHASE 2					PHASE 3																			
		Gateon	marker	Euro	CPP	PSE	La	IA	OM	ED	SA	ET	RAM	mart	EE	BOV	IG	IF	EH	4	CP	UB	CA	MART	4A	mart	EE	Es	High	No	
AUTHORITIES	EC	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	L	No	H						11	1
	Reg/Nat	No	H	x	L	H	L	L	No	H	H											H	No	H						6	3
	Other	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	0	0	
RESEARCH	RTO	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	13	0	
	Universities	H	H	H	H	H	H	H	H	H	H	H	No	H	H							H	H	L						11	1
	Private labs	No	L	L	L	H	L	H	No	H	No	H	No									L	No	L						3	4
	Other	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	0	0	
EDUCATION	Universities	No	H	x	H	L	H	H	No	No	No	L										H	H	No						6	4
	Academics of applied sciences	No	H	x	H	L	H	No	No	No	No	L										H	H	L						5	4
	Vocational training	No	L	x	L	L	H	No	No	No	No	L										L	H	H						3	4
	Private training	No	L	L	No	L	L	No	No	No	No	No										No	No	L						0	8
	Other	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	H	x	x						1	0
INVESTORS	Public	L	H	L	H	L	H	L	H	L	H	L	H									H	H	H						8	0
	Private	H	H	H	L	H	H	H	H	H	L	H										L	H	H						10	0
	Other	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	0	0	
LARGE COMPANIES	Tech provider	L	H	H	H	H	H	L	No	L	H											H	No	H						8	2
	Services provider	No	L	No	H	H	No	H	No	H	No	L	No									L	No	H						4	6
	Other	x	x	x	ems integ	x	x	x	x	x	x	x										System integrators				x					0
SERVICES ORGANIZAT	Incubators/Accelerators	No	H	No	L	H	L	L	No	No	L											L	H	L						3	4
	Clusters and industry associations	No	H	L	H	H	H	L	L	H	H											H	L	H						8	1
	DIH	No	H	L	H	H	H	H	L	H	H											H	H	H						10	1
	Other	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	0	0	
SMES (incl. start-ups) &	Tech provider	No	H	L	H	H	H	L	No	L	H											H	H	H						8	2
	Services provider	No	H	No	H	H	L	H	No	L	L											H	H	H						7	3
	Innovative company	H	H	H	H	H	H	H	H	H												H	L	H						11	0
	Other		x	x	x	x	x	x	x	x	x											x	x	x							

High relevancy

Low relevancy

No relevancy

No response

9 main SAE stakeholders (score ≥ 8) = EC / RTOs / Universities / Private investors / Clusters & industry associations / DIH / Tech providers / Services provider / Innovative companies



Sectors of Applications



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	PHASE 1				PHASE 2				PHASE 3						High	No
	Gateone	Smarter-SI	EuroCPS	CPS E-Labs	DIATOMIC	FED4SAE	TETRAMA X	SmartEEs	BOWI	DIG IFED	DIH4CPS	HUBCAP	SMART4A LL	SmartEEs2		
(AERO)SPACE	L	L	L	L	x	L	No	L	Focus is on manufacturing SMEs and midcaps, not application driven	L		L	H	L	1	1
BUILDING / CONSTRUCTION	H	H	H	L	x	H	H	H		H		H	No	H	9	1
CONSUMER ELECTRONICS	H	L	H	No	x	H	H	H		H		No	L	H	7	2
DIGITAL MANUFACTURING	H	H	L	H	H	H	H	L		H		H	L	L	8	0
ENERGY	H	L	H	H	x	H	H	H		H		L	L	H	8	0
ENVIRONMENT	H	H	H	L	x	H	H	L		H		L	H	L	7	0
FOOD & AGRICULTURE	H	H	H	H	H	H	H	H		H		H	H	H	12	0
IOT/SMART CONNECTED OBJECTS	H	H	H	H	H	H	H	H		H		H	H	H	12	0
MEDICAL / PHARMACEUTICAL / LIFE SCIENCE / HEALTH	H	H	H	No	H	H	H	H		H		L	L	H	9	1
NATURAL RESOURCES	No	H	No	L	x	No	L	No		No		No	L	No	1	7
PACKAGING / LOGISTICS	H	H	No	No	x	No	No	H		No		No	No	H	4	7
SAFETY / SECURITY	H	H	L	H	x	L	H	L		H		H	L	L	6	0
TRANSPORT / MOBILITY / AUTOMOTIVE	H	H	H	H	x	H	H	H		H		H	H	H	11	0
OTHER(S)	?	x	x	Smart City/urban environments	x	x	x	x				x	x	x		

High relevancy

Low relevancy

No relevancy

No response

- 8 main sectors (score ≥ 7) = FOOD & AGRICULTURE / IOT / TRANSPORT / BUILDING / HEALTH / CONSUMER ELECTRONICS / ENERGY / ENVIRONMENT



Products functionality vs. sectors



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Federating European Ecosystems
in nanoElectronics, Electronic smart systems
and flexible, organic & printed Electronics



	Sectors													Total
	(AERO)SPACE	BUILDING / CONSTRUCTION	CONSUMER ELECTRONICS	DIGITAL MANUFACTURING	ENERGY	ENVIRONMENT	FOOD & AGRICULTURE	IOT/SMART CONNECTED OBJECTS	MEDICAL / PHARMACEUTICAL	NATURAL RESOURCES	PACKAGING / LOGISTICS	SAFETY / SECURITY	TRANSPORT / MOBILITY / AUTOMOTIVE	OTHER(S)
ACTUATING	0	1	0	4	0	0	2	2	6	1	1	1	0	19
COMMUNICATING	2	3	3	10	2	5	3	13	9	2	6	2	6	68
COMPUTING / PROCESSING / DATA STORAGE	4	3	3	15	6	7	16	17	22	2	5	3	11	126
ENERGY HARVESTING / CONVERSION / STORAGE	0	2	0	1	2	0	0	0	2	0	0	0	0	8
SENSING	2	7	1	13	3	8	19	16	23	2	3	4	5	112
SIGNALLING (OPTICAL IMAGING, LIGHTING)	0	4	2	3	0	0	2	2	10	0	1	0	5	31
OTHER(S)	2	1	0	5	3	0	0	2	2	0	0	0	4	27
Total	10	21	9	51	16	20	42	52	74	7	16	10	32	31

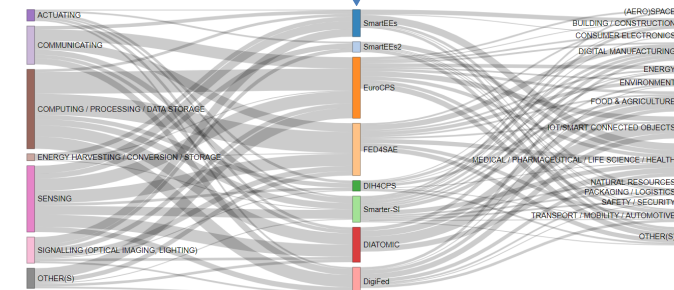
PHASE 1 inputs: Smart-SI; EuroCPS

PHASE 2 inputs: DIATOMIC; FED4SAE; SmartEEs;

PHASE 3 inputs: DIGIFED; DIH4CPS; SmartEEs2;

- 150 AEs from 8 DIHs mapped Experiments mapping
- Groups of hot spots in the product functionality/sectors of application map

Online dynamic visual



Lessons learnt



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	PHASE 1				PHASE 2				PHASE 3						High	No
	Gateone	Smarter-SI	EuroCPS	CPSE-Labs	DIATOMIC	FED4SAE	TETRAMAX	SmartEEs	BOWI	DIGIFED	DIH4CPS	HUBCAP	SMART4ALL	SmartEEs2		
[DIH] COMMUNICATION & DISSEMINATION	No	H	H	H	H	H	H	L	H	H		H	H	L	10	1
[DIH] SERVICES	No	H	H	H	H	H	H	H	H	H		H	L	H	11	1
[DIH] ECOSYSTEM	No	H	L	H	H	H	H	H	H	H		H	H	H	11	1
[DIH] MARKETPLACE	No	H	No	H	H	L	H	L	No	No		H	H	L	6	4
[DIH] EXPLOITATION & SUSTAINABILITY	No	H	H	H	H	H	H	H	H	H		H	H	H	12	1
[OPEN CALL] SME/MIDCAP OUTREACH	No	L	L	H	H	L	H	H	H	H		H	H	H	9	1
[OPEN CALL] EVALUATION & SELECTION	No	L	H	H	H	H	H	H	L	H		H	L	H	9	1
[APPLICATION EXPERIMENTS] CONTRACTING	No	L	H	H	H	H	H	H	L	H		H	H	H	10	1
[APPLICATION EXPERIMENTS] EXECUTION	No	H	H	H	H	H	H	H	L	H		H	H	H	11	1
[APPLICATION EXPERIMENTS] FOLLOW-UP	No	H	L	H	H	H	H	H	L	H		H	H	H	10	1
OTHER(S)	x	x	x	x	x	x	x	x	x			x	x	x		

High relevancy

Low relevancy

No relevancy

No response

- Most categories relevant to all IAs





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Collaboration, online discussion

- DIH network cohesion
- SAE capability map
- Major stakeholders
- Lessons learnt
- Outreach



DIHs network cohesion



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PHASE 1				PHASE 2				PHASE 3						
Gateone	Smarter-SI	EuroCPS	CPSE-Labs	DIATOMIC	FED4SAE	TETRAMAX	SmartEEs	BOWI	DIGIFED	DIH4CPS	HUBCAP	SMART4ALL	SmartEEs2	
SSI	SSI	CPS	CPS	SSI	CPS	CLEC for CPS/NoT	OLAE	X	CPS	CPS	CPS	CLEC for CPS/NoT	FwE	Gateone
	H/H	H/L	H/H	No/No	H/H	No/L	H/H	No/L	H/L	No/	No/No	No/No	H/H	Smarter-SI
		H/L	H/L	H/No	H/H	H/L	H/H	H/No	H/No	H/	H/No	H/No	H/L	EuroCPS
				No/No	H/H	No/L	L/H	No/No	L/L	No/	No/L	No/L	No/L	CPSE-Labs
				No/No	H/H	No/L	L/L	No/No	H/No	No/	H/H	No/No	L/L	DIATOMIC
					L/L	L/H	L/L	No/L	No/No	No/	H/No	L/L	L/L	FED4SAE
						L/H	H/H	L/No	H/H	L/	L/L	L/L	H/H	TETRAMAX
							H/L	L/H	L/No	L/	L/No	L/H	L/L	SmartEEs
								L/H	H/H	No/	No/No	No/No	H/H	BOWI
									L/No	No/	L/No	H/No	H/L	DIGIFED
									No/	No/	L/No	No/No	H/H	DIH4CPS
											/No	/No	/L	HUBCAP
												No/No	No/No	SMART4ALL
													No/No	SmartEEs2

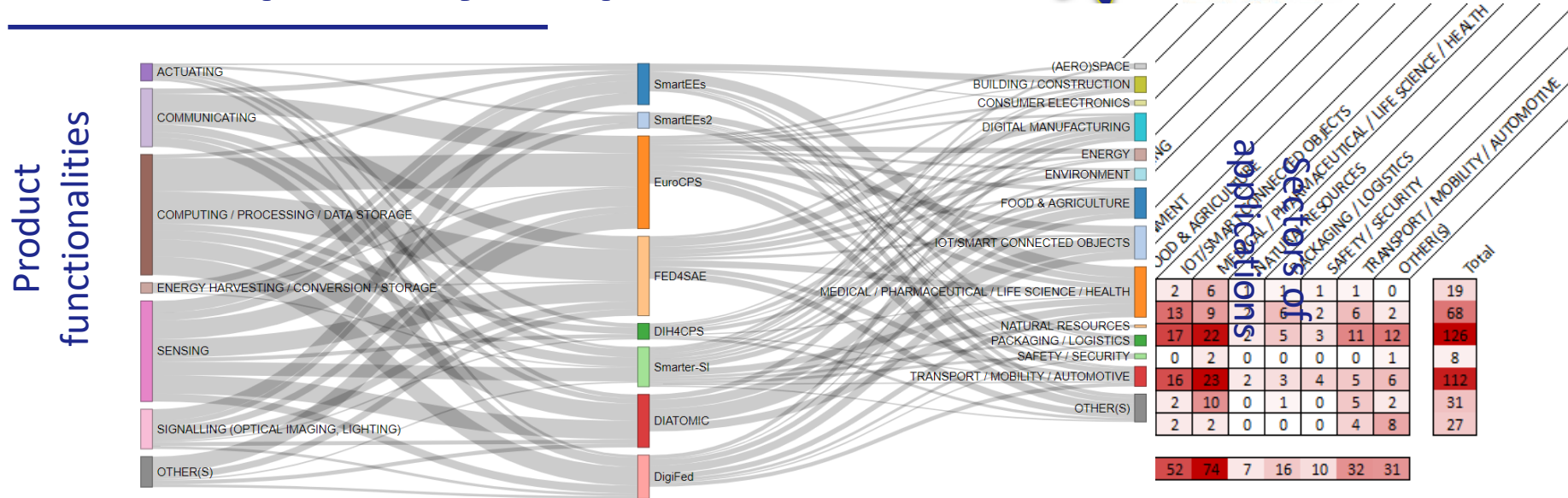
COHESION (H/H; H/L; L/H)
 LOW COHESION (L/L)
 NO COHESION (L/No; No/L; No/No)
 UNCLEAR (Mismatch)

1. Collaboration by KDT topics? What for ? CPS is clearly the central topic...
2. Collaboration with EU13? Linking IAs' services to BOWI ? Marketplaces synergy (e.g. for CPS)?
3. Collaboration on COVID ? How?
4. What else ?

Max 20 min
discussion



SAE capability map



1. Interest/value in the mapping for SMEs/MidCaps?
2. Promote an online live map ? Fed by incoming Application Experiments?
3. Use of the mapping in outreach activities to bring awareness on SAE capability and cross-IAs potential?
4. Should we have applications focus actions? On Sectors with high (or low) levels of AEs?
5. What else?

Max 20 min
discussion



Major stakeholders



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EC / RTOs / Universities / Private investors / Clusters & industry associations /
DIH / Tech providers / Services provider / Innovative companies

1. Which major stakeholders to target in priority? What for?
2. Which stakeholders to focus on at cross-DIH level? What for? How?
3. What format to exchange with them? Webinars...

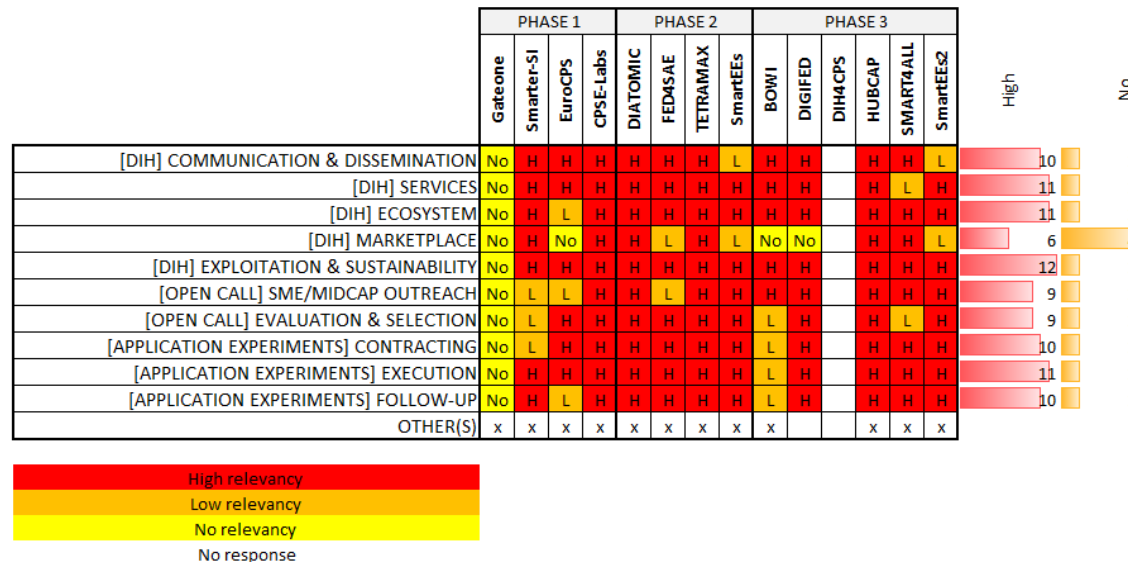
Max 20 min
discussion



Lessons learnt



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1. Do all IAs consider lessons as an output of their action?
2. Which categories of lessons to address in priority?
3. Do IAs have sufficient resource/time to bullet-list their lessons (the prioritized ones)?
4. Could we aim at consolidated lessons? That could be also valorized inside each IA...
5. Other?

Max 20 min
discussion





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1. What is the best vectors for IAs to outreach these days of COVID? Webinars?...
2. Should we organize a webinar-day for applicants on CPS? Joining forces to outreach and invite companies? And presenting CPS offers and a consolidated calendars for calls?
3. Should we have a BOWI webinar outreach EU13 stakeholders and all IAs presenting?
4. Should we have a COVID-focused webinar with all IAs presenting their KDT solutions? What else?

Max 20 min
discussion





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- To map DIH stakeholder companies (open calls)
 - (Innovative) companies
Start-up / SME (<10, 10-50, < 250) / Mid-cap (250-3000)
 - Countries
 - Application domains
 - Applicants / granted companies





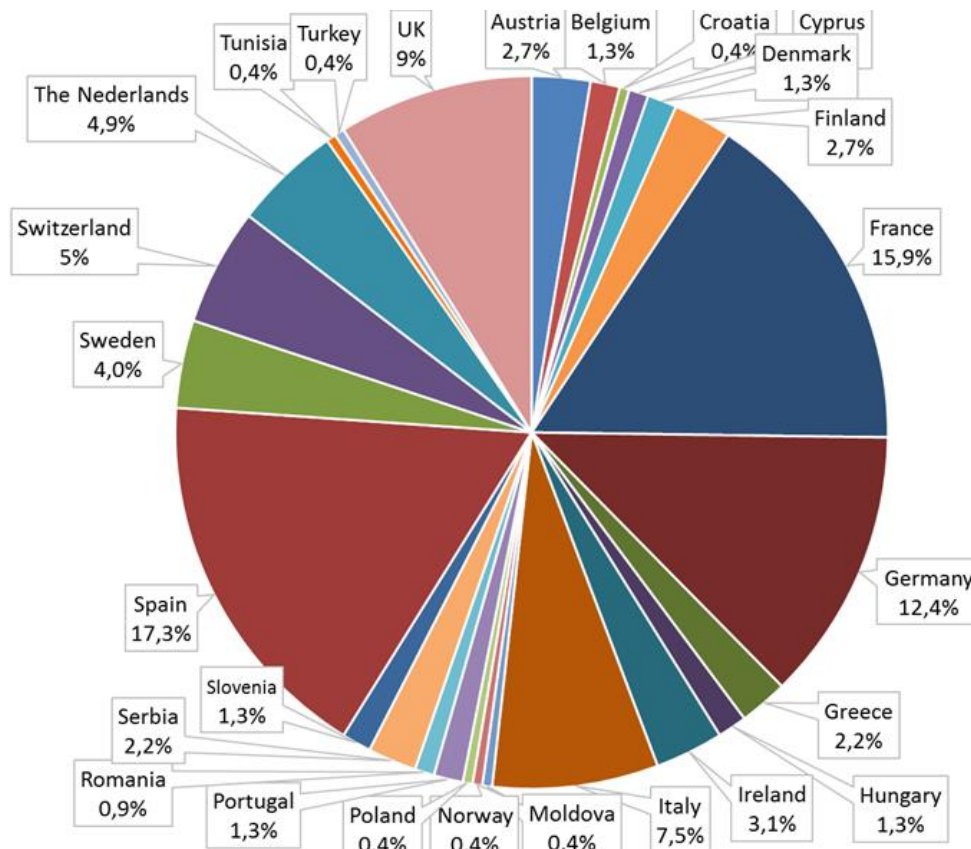
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- SAE phases 1&2 results



Geographical distribution of benefitting enterprises / SAE open calls awarded companies

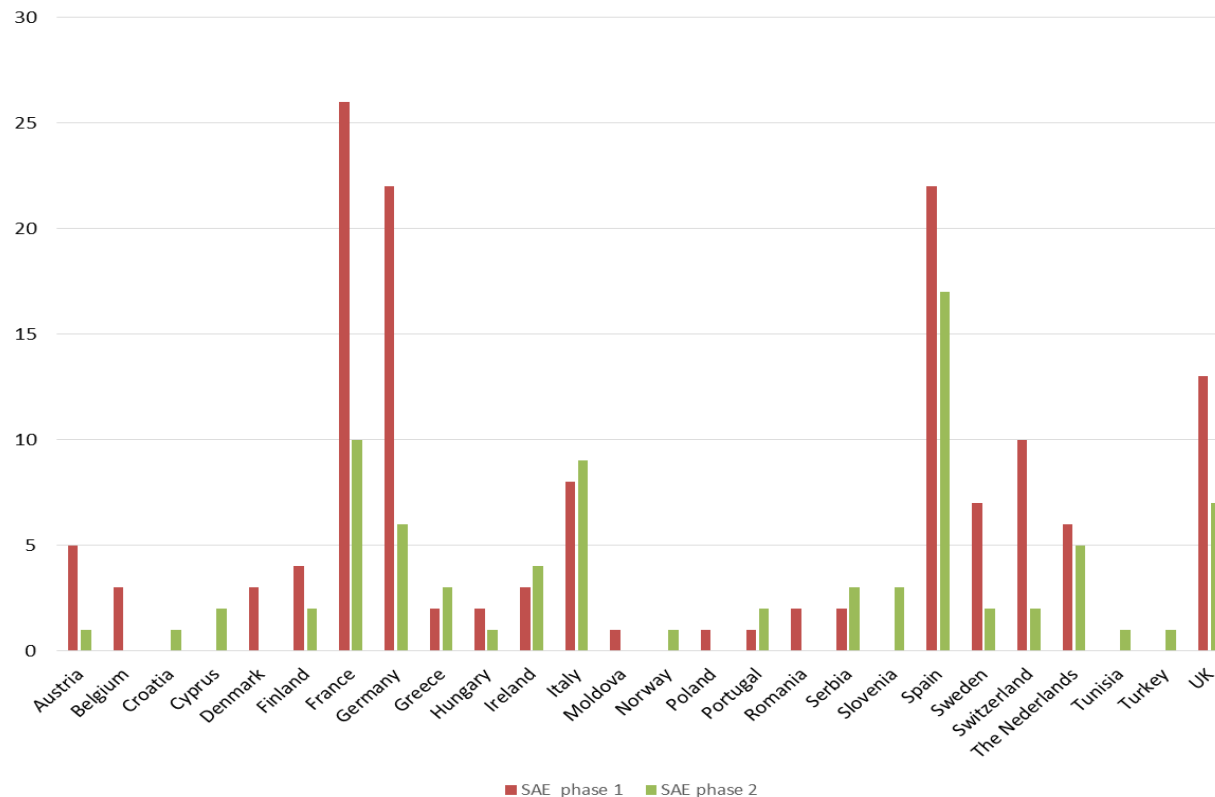


- 26 countries
- 36% outside core countries of the IAs (42% for SAE 1st phase, 30% for SAE 2nd phase)
- SAE 1st phase → SAE 2nd phase: 5 new countries, Croatia, Cyprus, Tunisia, Turkey, Slovenia
- SAE 1st phase only: Denmark, Poland, Romania



- SAE phases 1&2 results

Geographical distribution of benefitting enterprises / SAE granted proposals per country



- *close collaboration is based on trust between the involved partners – especially when going all the way to a product on the market, where multiple commitments have to be set in place, reaching far beyond the limited runtime of the funded project.*
- *Cross-border collaboration : SAE 2nd phase requirement*



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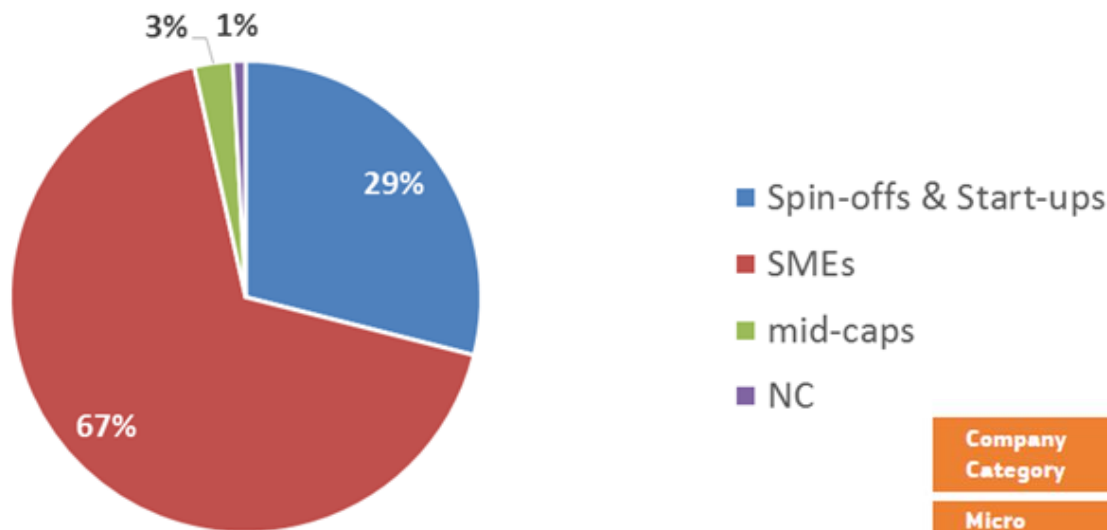


• SAE phases 1&2 results



SAE beneficiaries ID, mainly “tech” companies

SAE - granted companies profiles



Company Category	Employees	Turnover	Balance sheet total
Micro	< 10	< €2 million	< €2 million
Small	< 50	< €10 million	< €10 million
Medium - sized	<250	< €50 million	< €43 million

Source: Commission Recommendation of 6 May 2003 concerning the definition of micro, small, and medium-sized enterprises. (2003/361/EC), Official Journal of the European Union, L 124/36, 20 May 2003





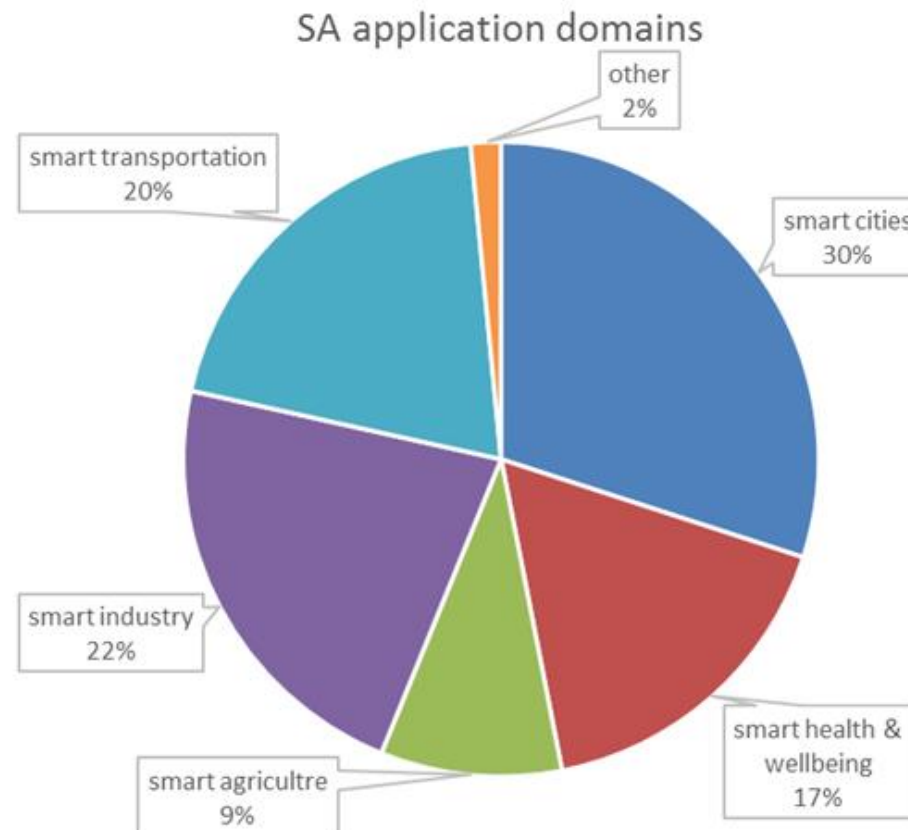
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- SAE phases 1&2 results



Application domain trends





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- SAE phases 1&2&3 results
 - IA mapping → WP2 survey
 - IA application domain → WP2 survey
 - **Open call geographical distribution (applicants & granted project)**
 - **Company profile (open call applicants & granted companies)**

Dedicated excel file to collect
every IA data



Your input is needed



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	total	Austria	Belgium	Bosnia & Herzegovina	Bulgaria	Croatia	Cyprus	Czech Republic	Denmark	Estonia	Finland	France	Germany	Greece
DigiFed														
<i>Consortium Core countries</i>			1	1								1	1	
Submitted proposals	72													
Granted proposals	14													
submitting company			1	4	1	2			1		6		9	7
Granted Company				3		1					1		5	1
SmartEES2														
<i>Consortium Core countries</i>				1					1			1	1	1
Submitted proposals														
Granted proposals														
submitting company														
Granted Company														
TETRAMAX														
<i>Consortium Core countries</i>				1		1	1		1		1	1	1	1
Submitted proposals	73													
Granted proposals	13													
submitting company							1						3	4
Granted Company	16						1						3	1
DIH4CPS														
<i>Consortium Core countries</i>				1										1
Submitted proposals														
Granted proposals														
submitting company														
Granted Companies														
HUBCAP														
<i>Consortium Core countries</i>			1											

	spin-off & start-up	SME	SME	SME	SME	SME	mid-caps	NC	total
		micro (<10)	small (<50)	medium (< 250)	NC	all	(<3000)		
DigiFed (applicants)	28	39	16	3			7		
DigiFed (selection)									
SMARTEES2 (applicants)									
SmartEES2 (selection)									
HUBCAP (applicants)									
HUBCAP (selection)									
TETRAMAX (applicants)									

