S3 Agrofood Platform on High Tech Farming

Insights gained from the mapping exercise

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Objective

What?

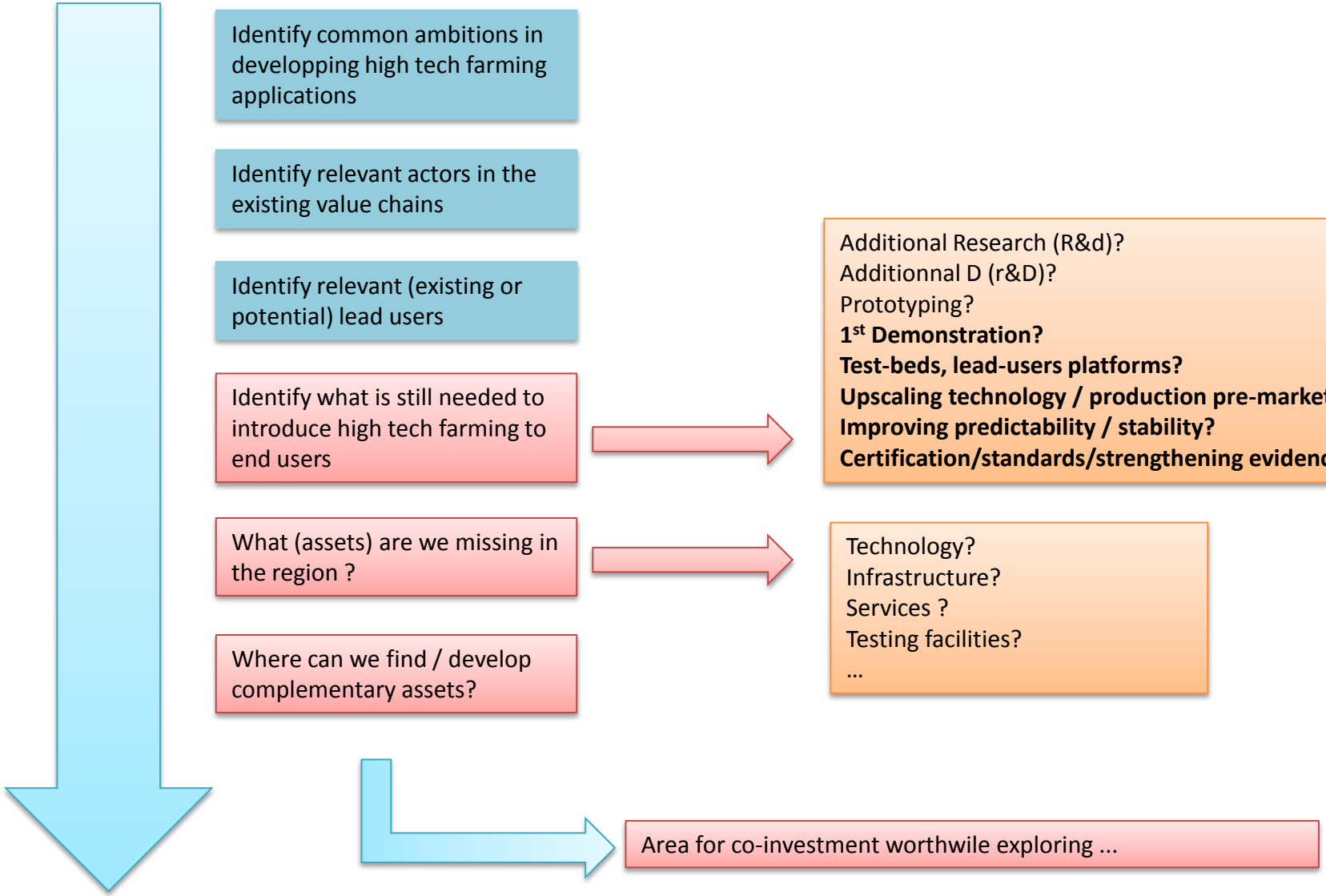
- **Start a partnership for co-investment** in the area of high tech farming (in the context of the thematic smart specialisation platform on Agri-Food)
- **Identify and specify a specific area for co-investment**, with high potential business and societal return at regional and European level

How?

- Find the **required granularity to interest partnering** of real business and innovation actors **in a value chain network**
- Successive **steps of 'mapping' and 'matching'** through a discovery process
- The scoping note will **set the scene** for such a process, articulate the interest of lead-regions and the potential synergies between partners

More info at http://s3platform.jrc.ec.europa.eu/agri-food

How to identify a specific area for co-investment?



Mapping actors – State of play

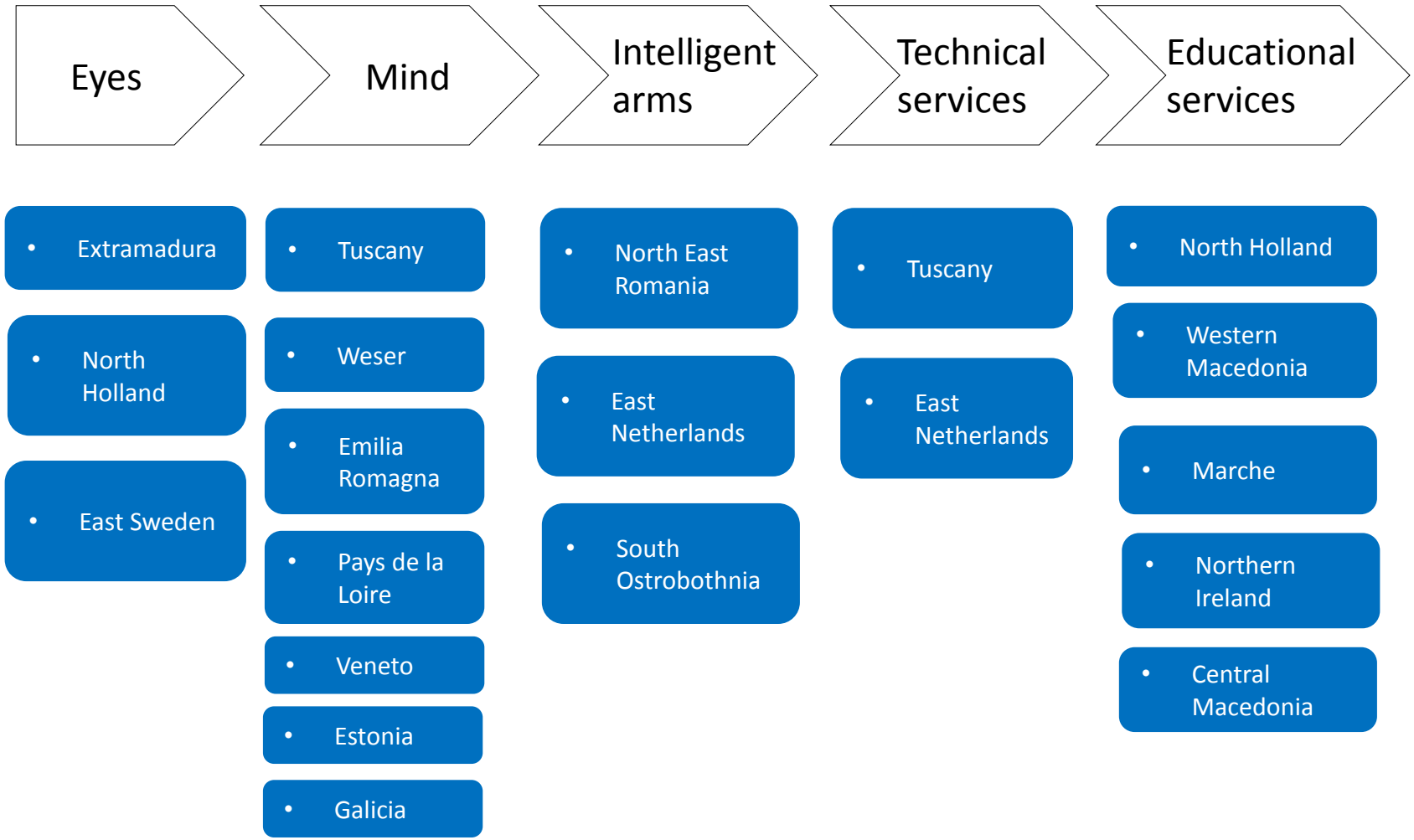
	Number of regions	Name of regions
Arable, Cereals, Vegetables (outdoor)	17 regions	Tuscany, Extremadura, Western Macedonia, Weser, Marche, Emilia Romagna, North Holland, North East Romania, Northern Ireland, Central Macedonia, Pays de la Loire, East Netherlands, Veneto, Estonia, Galicia, South Ostrobothnia, East Sweden.
Viticulture, Nursery, Fruit	11 regions	Tuscany, Extremadura, Western Macedonia, Weser-Em, Marche, Emilia-Romagna, North East Romania, Central Macedonia, Pays de la Loire, Veneto, Galicia.
Livestock Indoor	8 regions	Weser-Em, Emilia-Romagna, Central Macedonia, East Netherlands, Veneto, Galicia, South Ostrobothnia, East Sweden.
Livestock Outdoor	6 regions	Extremadura, Western Macedonia, Northern Ireland, Central Macedonia, Galicia, East Sweden.
Protected Cultivations	4 regions	Central Macedonia, Pays de la Loire, South Holland, Tuscany

Mapping actors – Overview Arable, Cereals, Vegetables (outdoor)

Arable, Cereals, vegetables (outdoor)	EYES				MIND				INTELLIGENT ARMS			TECHNICAL SERVICES			EDUCATIONAL SERVICES		Total
	Meteo sensors	Soil sensors	Canopy sensors	Product sensors	Data acquisition	Data analysis	Layers/images	DSS	MACHINERIES	Automation	Robotic	Installing	Maintenance	Repairing	Training	Demo	
Total Tuscany	2	3	3	2	5	6	5	2	0	5	3	5	5	4	5	4	59
% Tuscany	3%	5%	5%	3%	8%	10%	8%	3%	0%	8%	5%	8%	8%	7%	8%	7%	
Total Extremadura	9	7	4	1	0	4	2	3	0	1	1	4	4	1	2	9	52
% Extremadura	17%	13%	8%	2%	0%	8%	4%	6%	0%	2%	2%	8%	8%	2%	4%	17%	
Total Western Macedonia	3	2	2	2	3	2	2	2	1	1	0	0	0	0	2	7	29
% Western Macedonia	10%	7%	7%	7%	10%	7%	7%	7%	3%	3%	0%	0%	0%	0%	7%	24%	
Total Weser	0	3	1	7	10	10	6	6	8	8	6	5	5	5	8	9	97
% Weser	0%	3%	1%	7%	10%	10%	6%	6%	8%	8%	6%	5%	5%	5%	8%	9%	
Total Marche	1	2	2	0	2	3	1	4	0	0	2	1	1	0	6	6	31
% Marche	3%	6%	6%	0%	6%	10%	3%	13%	0%	0%	6%	3%	3%	0%	19%	19%	
Total Emilia Romagna	1	1	9	1	30	29	5	22	2	1	0	1	1	0	6	6	115
% Emilia Romagna	1%	1%	8%	1%	26%	25%	4%	19%	2%	1%	0%	1%	1%	0%	5%	5%	
Total North Holland	5	6	1	0	4	4	1	2	2	1	1	4	4	4	6	5	50
% North Holland	10%	12%	2%	0%	8%	8%	2%	4%	4%	2%	2%	8%	8%	8%	12%	10%	
Total North East Romania	16	5	0	9	0	15	0	15	48	1	0	0	0	0	12	20	141
% North East Romania	11%	4%	0%	6%	0%	11%	0%	11%	34%	1%	0%	0%	0%	0%	9%	14%	
Total Northern Ireland	3	2	2	2	3	2	2	2	1	1	0	0	0	0	2	7	29
% Northern Ireland	10%	7%	7%	7%	10%	7%	7%	7%	3%	3%	0%	0%	0%	0%	7%	24%	
Total Central Macedonia	5	5	5	2	7	9	6	4	5	6	4	5	5	5	7	13	93
% Central Macedonia	5%	5%	5%	2%	8%	10%	6%	4%	5%	6%	4%	5%	5%	5%	8%	14%	
Total Pays de la Loire	5	6	9	7	10	6	9	8	7	7	9	2	1	1	8	5	100
% Pays de la Loire	5%	6%	9%	7%	10%	6%	9%	8%	7%	7%	9%	2%	1%	1%	8%	5%	
Total East Netherlands	1	0	0	1	3	3	3	0	3	4	2	4	1	1	2	4	32
% East Netherlands	3%	0%	0%	3%	9%	9%	9%	0%	9%	13%	6%	13%	3%	3%	6%	13%	
Total Veneto					1	1	1	1		0	0	0	0	0	0	0	4
% Veneto	0%	0%	0%	0%	25%	25%	25%	25%	0%	0%	0%	0%	0%	0%	0%	0%	
Total Estonia	4	0	3	0	9	5	4	7	0	0	3	0	0	0	2	4	41
% Estonia	10%	0%	7%	0%	22%	12%	10%	17%	0%	0%	7%	0%	0%	0%	5%	10%	
Total Galicia	3	4	1	1	8	11	5	10	1	0	0	3	3	1	6	4	61
% Galicia	5%	7%	2%	2%	13%	18%	8%	16%	2%	0%	0%	5%	5%	2%	10%	7%	
Total South Ostrobothnia	5	6	4	13	10	9	6	8	12	12	14	9	9	9	11	4	141
% South Ostrobothnia	4%	4%	3%	9%	7%	6%	4%	6%	9%	9%	10%	6%	6%	6%	8%	3%	
Total East Sweden	3	2	5	6	6	3	5	1	3	3	2	1	1	3	3	4	51
% East Sweden	6%	4%	10%	12%	12%	6%	10%	2%	6%	6%	4%	2%	2%	6%	6%	8%	

Mapping actors – Arable, Cereals, Vegetables

Connecting smartly existing regional capabilities

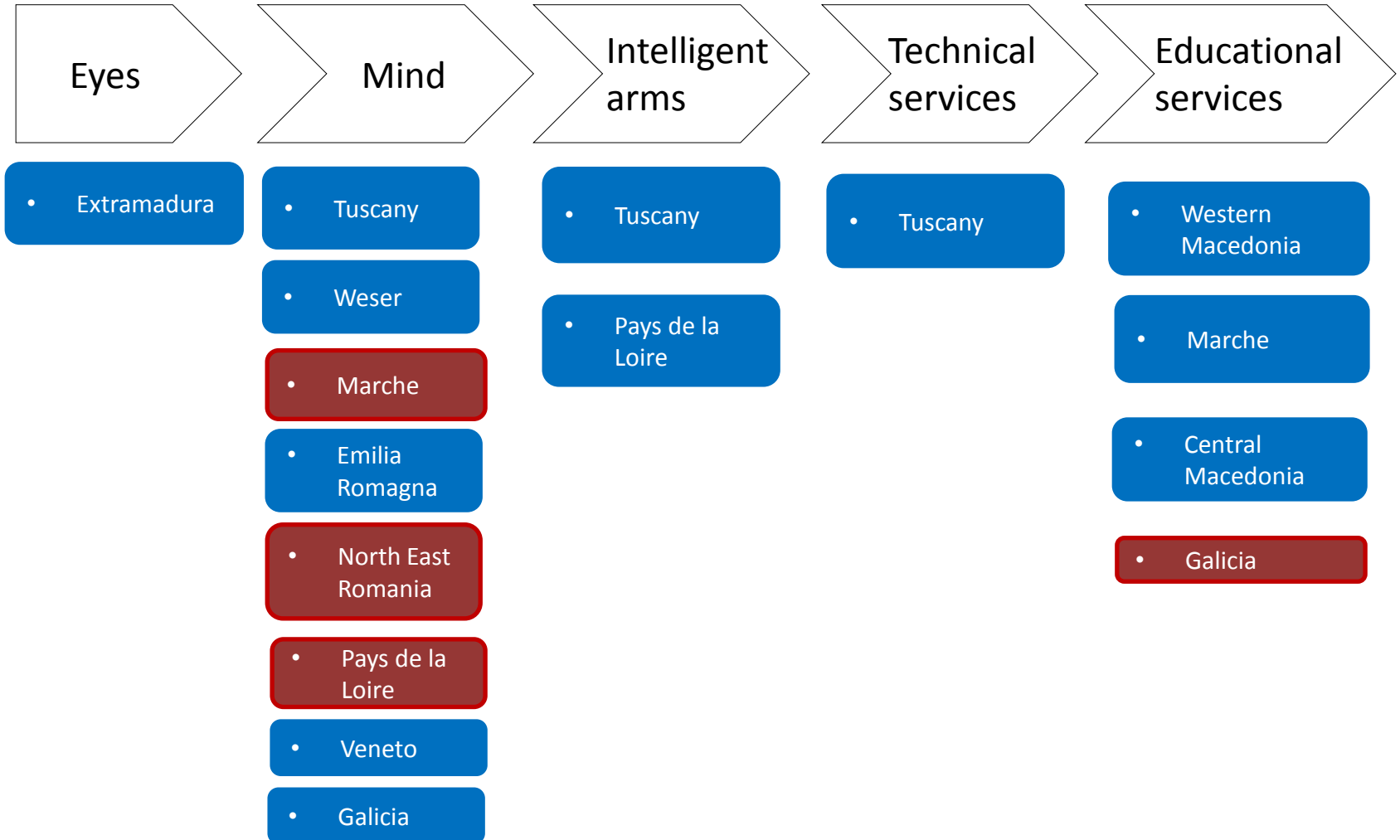


Mapping actors – Overview Viticulture, Nursery, Fruit

Viticulture, nursery, fruit	EYES				MIND				INTELLIGENT ARMS			TECHNICAL SERVICES			EDUCATIONAL SERVICES		Total
	Meteo sensors	Soil sensors	Canopy sensors	Product sensors	Data acquisition	Data analysis	Layers/ images	DSS	MACHINERIES	Automation	Robotic	Installing	Maintenance	Repairing	Training	Demo	
Total Tuscany	2	3	3	2	5	6	5	2	1	6	3	5	5	4	4	5	*61*
% Tuscany	3%	5%	5%	3%	8%	10%	8%	3%	2%	10%	5%	8%	8%	7%	7%	8%	
Total Extremadura	18	13	6	1	0	6	4	5	0	4	1	3	3	1	2	17	*84*
% Extremadura	21%	15%	7%	1%	0%	7%	5%	6%	0%	5%	1%	4%	4%	1%	2%	20%	
Total Western Macedonia	1	1	1	1	1	1	1	1	1	1	1	2	2	2	3	9	*29*
% Western Macedonia	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	7%	7%	7%	10%	31%	
Total Weser	0	1	0	1	6	6	0	0	1	1	0	1	1	1	2	1	*22*
% Weser	0	5%	0	5%	27%	27%	0%	0	5%	5%	0	5%	5%	5%	9%	5%	
Total Marche	0	1	3	0	4	4	1	1	0	0	0	0	0	0	3	7	*24*
% Marche	0%	4%	13%	0%	17%	17%	4%	4%	0%	0%	0%	0%	0%	0%	13%	29%	
Total Emilia-Romagna	2	1	10	3	18	11	2	17	8	2	2	4	2	0	13	2	*97*
% Emilia-Romagna	2%	1%	10%	3%	19%	11%	2%	18%	8%	2%	2%	4%	2%	0%	13%	2%	
Total North East Romania	8	3	0	0	0	22	8	22	10	0	0	0	0	2	10	7	*92*
% North East Romania	9%	3%	0%	0%	0%	24%	9%	24%	11%	0%	0%	0%	0%	2%	11%	8%	
Total Central Macedonia	5	5	5	2	7	9	6	4	5	5	3	5	5	5	7	11	*89*
% Central Macedonia	6%	6%	6%	2%	8%	10%	7%	4%	6%	6%	3%	6%	6%	6%	8%	12%	
Total Pays de la Loire	4	5	8	6	9	5	7	7	6	7	9	1	1	1	8	5	*89*
% of Pays de la Loire	4%	6%	9%	7%	10%	6%	8%	8%	7%	8%	10%	1%	1%	1%	9%	6%	
Total Veneto	3	4	4	5	6	8	3	5	1	0	0	0	0	0	0	0	*39*
% Veneto	8%	10%	10%	13%	15%	21%	8%	13%	3%	0%	0%	0%	0%	0%	0%	0%	
Total Galicia	7	6	2	1	12	12	5	12	0	0	0	8	7	4	13	11	*100*
% of Galicia	7%	6%	2%	1%	12%	12%	5%	12%	0%	0%	0%	8%	7%	4%	13%	11%	

Mapping actors – Viticulture, Nursery, Fruit

Connecting smartly existing regional capabilities

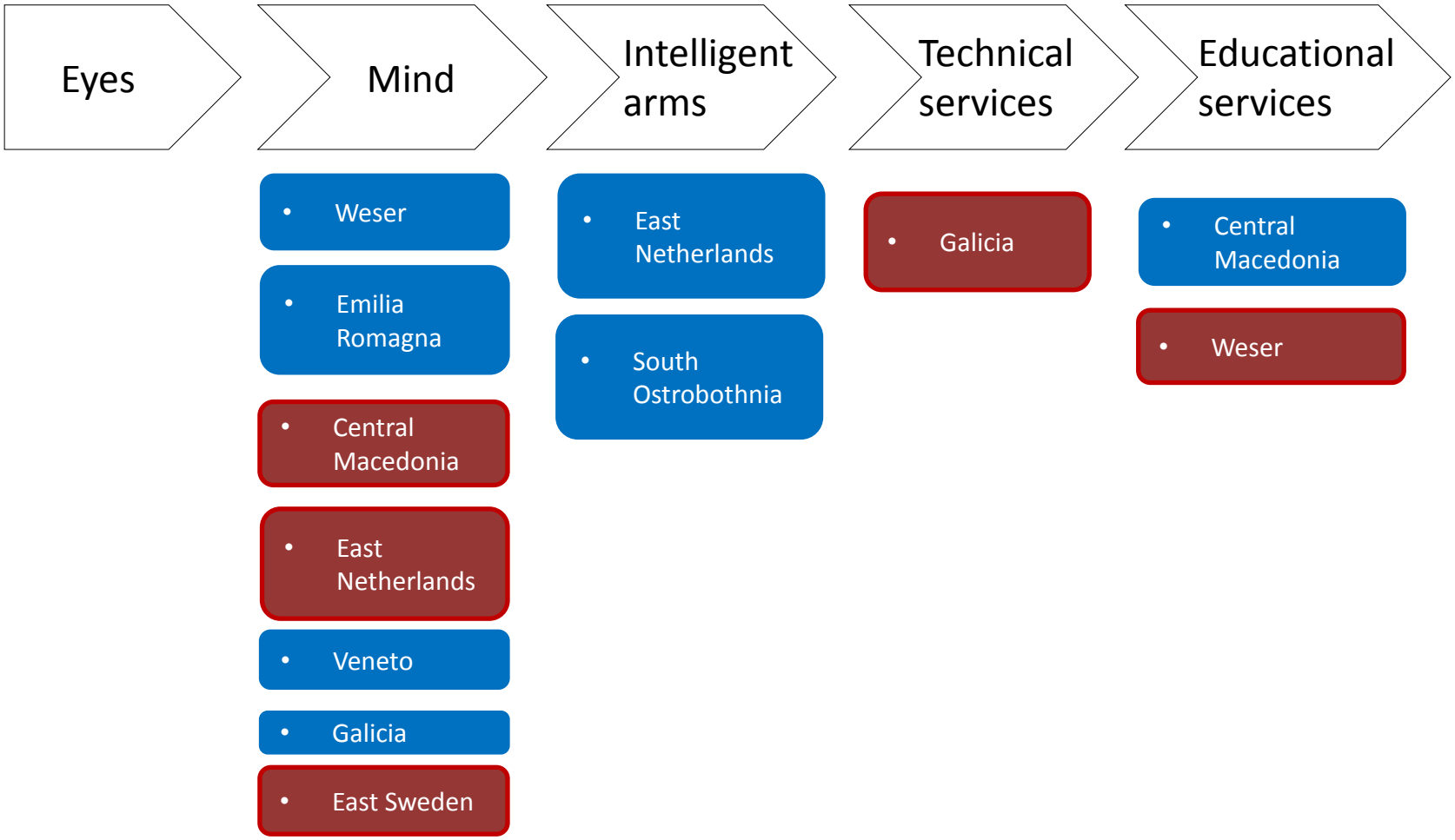


Mapping actors – Livestock Indoor

Livestock indoor	EYES				MIND				INTELLIGENT ARMS			TECHNICAL SERVICES			EDUCATIONAL SERVICES		Total
	Meteo sensors	Soil sensors	Canopy sensors	Product sensors	Data acquisition	Data analysis	Layers/images	DSS	MACHINERIES	Automation	Robotic	Installing	Maintenance	Repairing	Training	Demo	
Total Weser	0	0	0	6	8	8	7	7	6	6	2	6	6	6	8	6	82
% Weser	0%	0%	0%	7%	10%	10%	9%	9%	7%	7%	2%	7%	7%	7%	10%	7%	
Total Emilia-Romagna	0	0	0	4	4	4	0	1	1	2	1	2	1	1	2	1	24
% Emilia-Romagna	0%	0%	0%	17%	17%	17%	0%	4%	4%	8%	4%	8%	4%	4%	8%	4%	
Total Central Macedonia	1	1	1	4	5	6	3	3	4	6	4	3	5	5	3	7	61
% Central Macedonia	2%	2%	2%	7%	8%	10%	5%	5%	7%	10%	7%	5%	8%	8%	5%	11%	
Total East Netherlands	1	0	0	3	5	7	3	0	5	5	3	4	2	2	3	4	47
% East Netherlands	2%	0%	0%	6%	11%	15%	6%	0%	11%	11%	6%	9%	4%	4%	6%	9%	
Total Veneto	1	1	0	5	7	7	1	6	1	0	0	0	0	0	0	0	29
% Veneto	3%	3%	0%	17%	24%	24%	3%	21%	3%	0%	0%	0%	0%	0%	0%	0%	
Total Galicia	3	3	1	2	12	14	3	15	1	0	0	10	9	7	7	4	91
% Galicia	3%	3%	1%	2%	13%	15%	3%	16%	1%	0%	0%	11%	10%	8%	8%	4%	
Total South Ostrobothnia	5	6	4	13	10	9	6	8	12	12	14	9	9	9	11	4	141
% South Ostrobothnia	4%	4%	3%	9%	7%	6%	4%	6%	9%	9%	10%	6%	6%	6%	8%	3%	
Total East Sweden	1	3	2	5	6	6	3	5	1	3	3	2	1	1	3	3	48
% East Sweden	2%	6%	4%	10%	13%	13%	6%	10%	2%	6%	6%	4%	2%	2%	6%	6%	

Mapping actors – Livestock Indoor

Connecting smartly existing regional capabilities

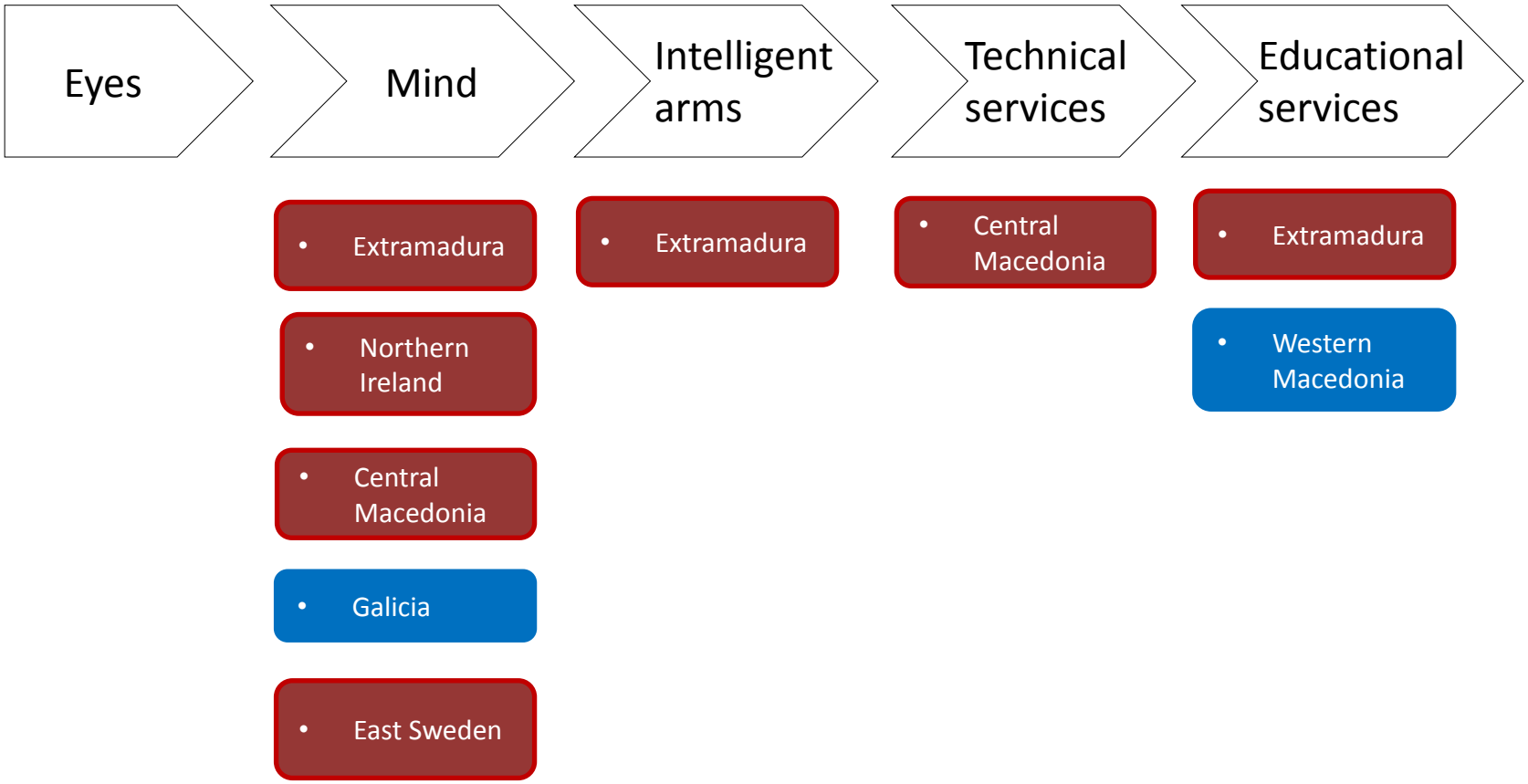


Mapping actors – Livestock Outdoor

Livestock Outdoor	EYES				MIND				INTELLIGENT ARMS			TECHNICAL SERVICES			EDUCATIONAL SERVICES		Total
	Meteo sensors	Soil sensors	Canopy sensors	Product sensors	Data acquisition	Data analysis	Layers/images	DSS	MACHINERIES	Automation	Robotic	Installing	Maintenance	Repairing	Training	Demo	
Total Extremadura	0	0	0	0	8	7	0	8	9	6	5	7	0	0	9	10	*69*
% Extremadura	0%	0%	0%	0%	12%	10%	0%	12%	13%	9%	7%	10%	0%	0%	13%	14%	
Total Western Macedonia	1	0	0	1	1	1	1	1	1	1	1	0	0	0	3	4	*16*
% Western Macedonia	6%	0%	0%	6%	6%	6%	6%	6%	6%	6%	6%	0%	0%	0%	19%	25%	
Total Nothern Ireland	4	4	3	3	13	13	10	13	0	0	0	1	1	1	5	8	*79*
% Nothern Ireland	5%	5%	4%	4%	16%	16%	13%	16%	0%	0%	0%	1%	1%	1%	6%	10%	
Total Central Macedonia	2	2	2	4	7	8	5	4	4	6	4	4	6	6	3	7	*74*
% Central Macedonia	3%	3%	3%	5%	9%	11%	7%	5%	5%	8%	5%	5%	8%	8%	4%	9%	
Total Galicia	3	3	1	2	4	8	2	7	0	0	0	2	1	0	5	3	*41*
% Galicia	7%	7%	2%	5%	10%	20%	5%	17%	0%	0%	0%	5%	2%	0%	12%	7%	
Total East Sweden	1	3	2	5	6	6	3	5	1	3	3	2	1	1	3	3	*48*
% East Sweden	2%	6%	4%	10%	13%	13%	6%	10%	2%	6%	6%	4%	2%	2%	6%	6%	

Mapping actors – Livestock Outdoor

Connecting smartly existing regional capabilities



Mapping actors – Protected Cultivations

Protected cultivation	EYES				MIND				INTELLIGENT ARMS			TECHNICAL SERVICES			EDUCATIONAL SERVICES		Total
	Meteo sensors	Soil sensors	Canopy sensors	Product sensors	Data acquisition	Data analysis	Layers/images	DSS	MACHINERIES	Automation	Robotic	Installing	Maintenance	Repairing	Training	Demo	
Total Central Macedonia	3	3	4	3	6	7	5	3	5	5	4	5	5	5	6	9	78
% Central Macedonia	4%	4%	5%	4%	8%	9%	6%	4%	6%	6%	5%	6%	6%	6%	8%	12%	
Total Pays de la Loire	5	6	8	7	9	5	9	7	8	7	9	4	3	3	8	5	103
% Pays de la Loire	5%	6%	8%	7%	9%	5%	9%	7%	8%	7%	9%	4%	3%	3%	8%	5%	
Total South Holland	1849	1852	379	1453	1882	1878	120	370	1990	1922	226	40	40	40	15	16	16184
% South Holland	11%	11%	2%	9%	12%	12%	1%	2%	12%	12%	1%	0,2%	0,2%	0,2%	0,1%	0,1%	

Mapping actors – Protected Cultivations

Connecting smartly existing regional capabilities

- South Holland

- South Holland
- Pays de la Loire

- South Holland

- Central Macedonia

Required granularity for connecting smartly existing regional capabilities

- ➔ Shared platform for joint-activities (common to various applications, domains, sectors), either by connecting / upscaling what already exists or by improving what exists and developing new activities
- ➔ Business oriented, including commitment of industry to lead/participate, specific attention should be paid to **industrial actors and SMEs**
- ➔ Added value of cross-regional collaboration

Next steps

STEP 1: Enlarging the partnership and defining a common objective and vision

- Selection of application domains
  - Tree nursery, Viticulture, Fruits (relatively highly intensive);
  - Livestock outdoor;
  - Livestock indoor;
  - Arable, Cereals, vegetables (outdoor – relatively less intensive);
  - Protected cultivation (different types of greenhouses, highly intensive).

DONE

- Highlighting the strategic positioning of selected Value Chains
  - Information on key players, clusters, etc.

DONE

- Completing the mapping for each partner Region
  - Identify additional actors;
  - Identify common challenges/problems encountered by end-users/companies;
  - Identifying farmers which are using/not using PF and why.
- Exploration for Joint Programming
  - Existing programmes and tools that can be used for joint activities and funding in the area of High Tech Farming (e.g. specific allocated budget, timing of existing calls, etc.);
  - Available internal resources (human and financial) to actively participate to the platform.

Next steps

STEP 2: Creating a pipeline of joint activities

- Inception phase – short term agenda: 2017
  - *Analysis of the mapping exercise to identify complementarities and gaps (by 1st Trimester 2017)*
  - *Selecting and* **connecting Regions, actors and demo sites (by 2nd Trimester 2017)**
  - Joint business oriented matchmaking (June 2017 – ERIAFF Conference or other possible EU Initiatives: DG AGRI matchmaking on Digitalization; Event in Portugal in October 2017)
  - Develop joint call for proposals under EARDF/ERDF/ESF Operational Programmes (e.g. Operational Groups of the EIP AGRI) – end of 2017.

- Longer term agenda

  This part of the activity will imply assessing possible cooperation under EU Programmes (INTERREG, Horizon 2020, etc.) and also specific activities for developing future Cohesion Policy and Research & Development initiatives (post 2020 programming).