



Integrating European research infrastructures for  
micro-nano fabrication of functional structures and devices  
out of a knowledge-based multimaterials' repertoire

**Universität St-Gallen  
Weiterbildungszentrum**

**European Research Infrastructures**

**14.June.2010 – 15.June.2010**

**Olaf Jedicke**

**Karlsruhe Institut für Technologie (KIT) Germany**



**Total personal staff**

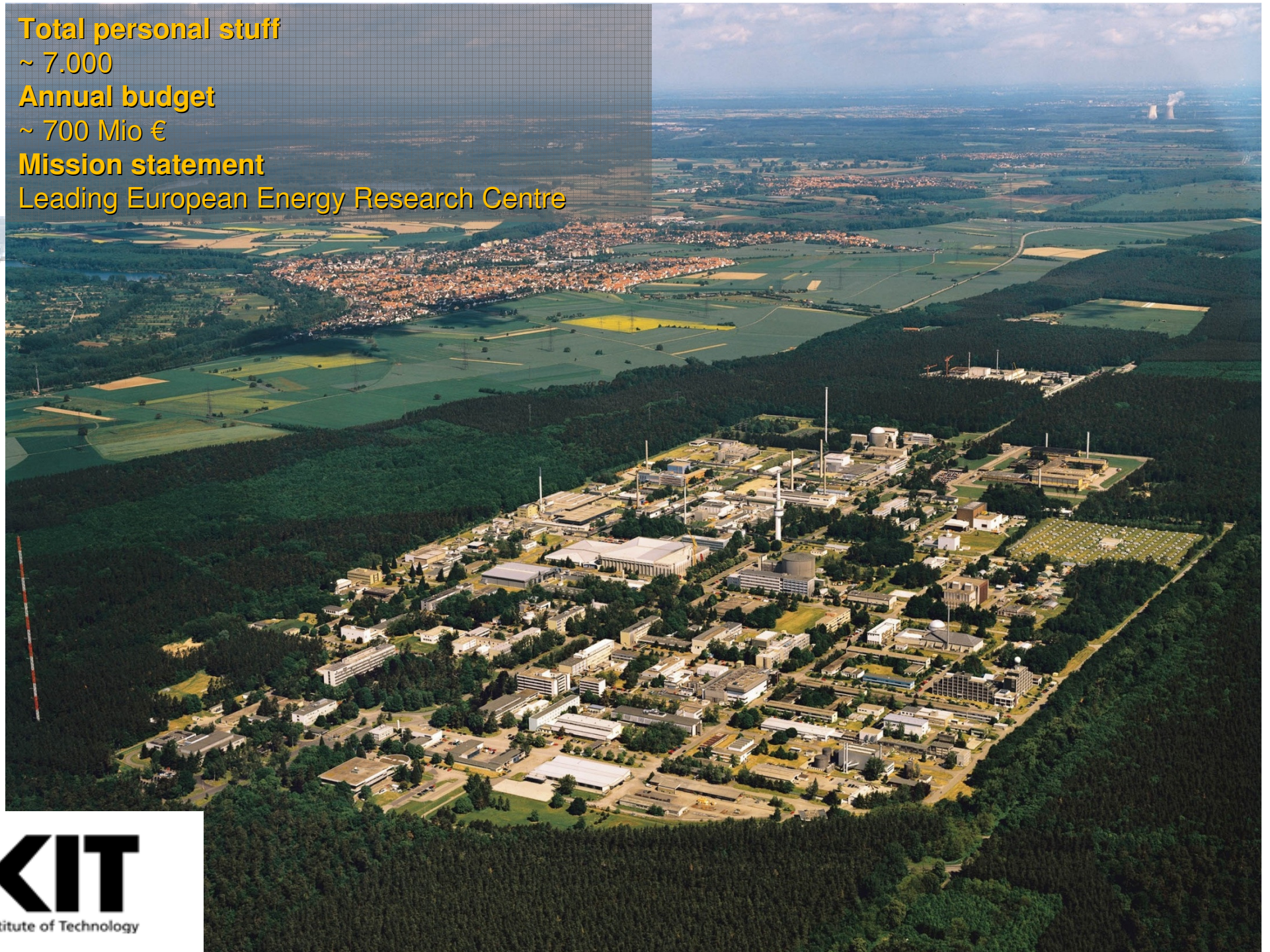
~ 7.000

**Annual budget**

~ 700 Mio €

**Mission statement**

Leading European Energy Research Centre







European Commission  
**CORDIS**

European Commission > CORDIS > FP7

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- Register your organisation
- Preparation and Submission of Proposals (EPSS)
- Get support
- Find project partners
- Find a project

	<b>Cooperation</b>		<b>Ideas</b>
	<b>People</b>		<b>Capacities</b>
<b>Euratom</b>		<b>JRC</b>	

**What type of user are you?**  
The Seventh Framework Programme (FP7) is designed to support a wide range of participants... [read more](#)

- Private company
- Public organisation
- Individual researchers
- Outside the EU



European Commission  
**CORDIS**

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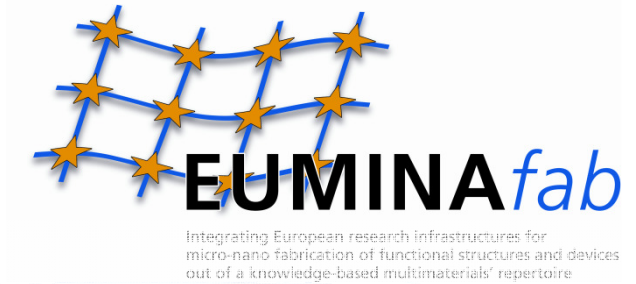
# Some Basics on Capacities



- **Budget within FP7: 4 076 mio €**
- **7 broad areas**
  - **Research Infrastructures**
  - **Research for the benefits of the SME**
  - **Research of knowledge**
  - **Research potential of Convergence Regions**
  - **Science in society**
  - **Support to the coherent development of research policies**
  - **International cooperation**



# Some Basics on Capacities



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# Basics on EUMINA*fab*



Integrating European research infrastructures for micro-nano fabrication of functional structures and devices out of a knowledge-based multimaterials' repertoire

SEVENTH FRAMEWORK PROGRAMME

FP7-INFRASTRUCTURES-2008-1

Integrating Activity

Grant agreement for: Coordination and Support Actions for Integrating Activities

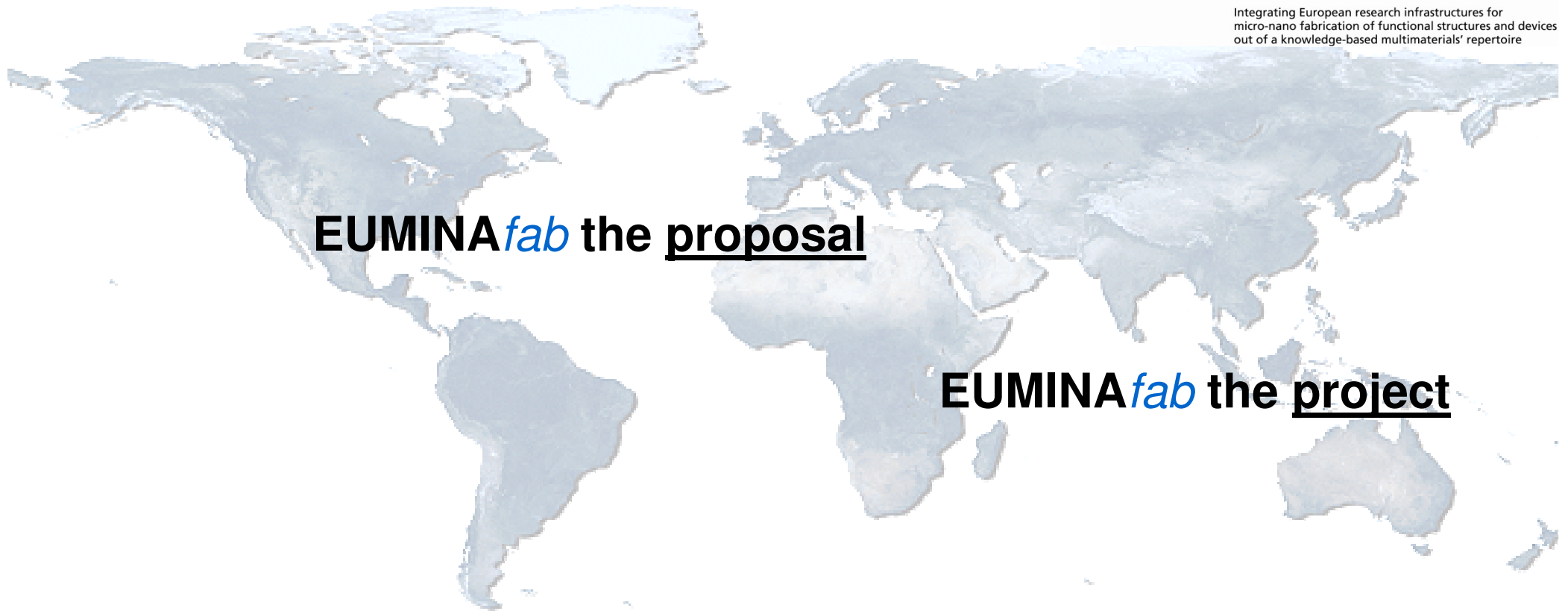
Grant agreement no.: FP7-226460



Integrating European research infrastructures for micro-nano fabrication of functional structures and devices out of a knowledge-based multimaterials' repertoire



# EUMINA*fab* Project (success story?)





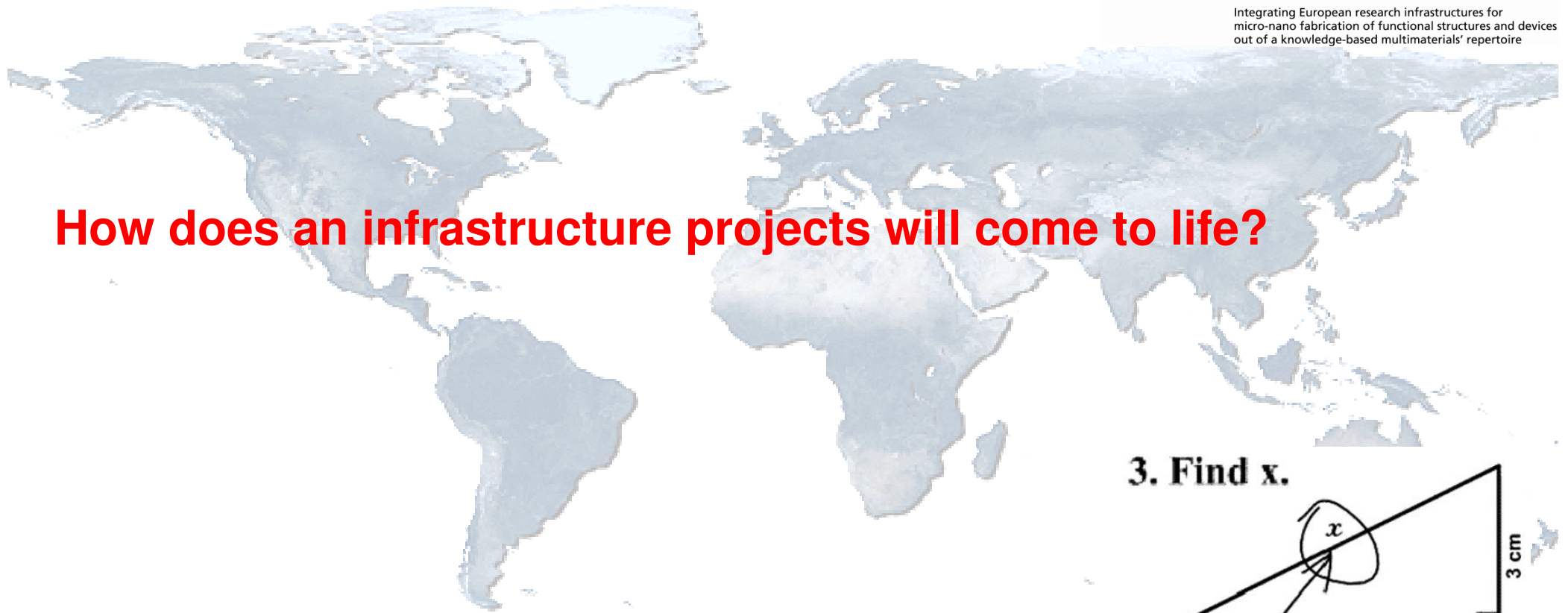
# EUMINA*fab* Project (success story?)



**EUMINA*fab* the proposal**

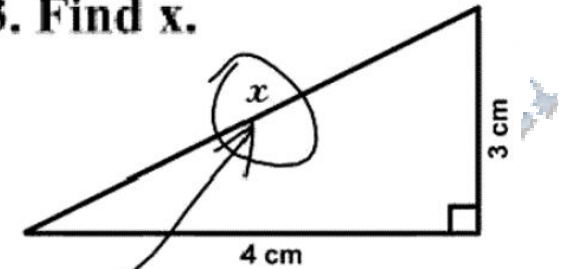
**EUMINA*fab* the project**

# EUMINAfab Project (success story?)



How does an infrastructure projects will come to life?

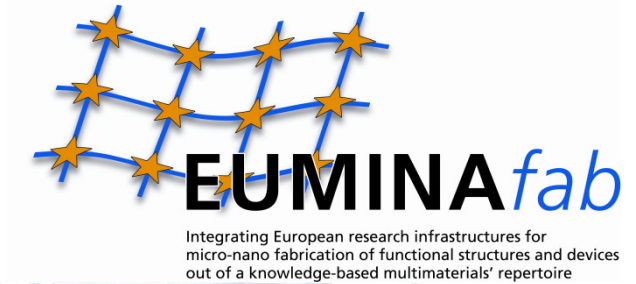
3. Find  $x$ .



*Here it is*



# EUMINAfab Project (basic history)



## basics history

- having a basic idea (*impact for Europe? advantages? generating knowledge? Etc.*)
- check who is already active in this field (*do you have really a new idea?*)
- wind up the idea in an useful discussion paper (*instrument for communication*)
- discussing these abstract with different colleagues (*evolution of the idea*)
- formulation of the main aim (*what will be the final aim and who will need this*)
- getting familiar with the possibilities and needed resources (*set up of requirements*)
- set up of a draft work plan (*aims, tasks, milestones, deliverables...*)
- set up of a consortium (...)
- ...

at this stage *you are already in set up a proposal...*

*... but already more than one year has passed by!*



# EUMINAfab Project (basic)



Perceive the demand of external institutions, *to use your technical infrastructure*

## **EUMINAfab** the proposal

To strengthen European science and economy by offering scientific possibilities (not only technical facilities) in supporting European Community, scientists, industry while generating knowledge by testing external “ideas” in a broad specific area through:

- offering scientific expertise (knowledge)
- offering special technologies (experiments)
- offering networking (connections)



# EUMINAfab Project (basic)



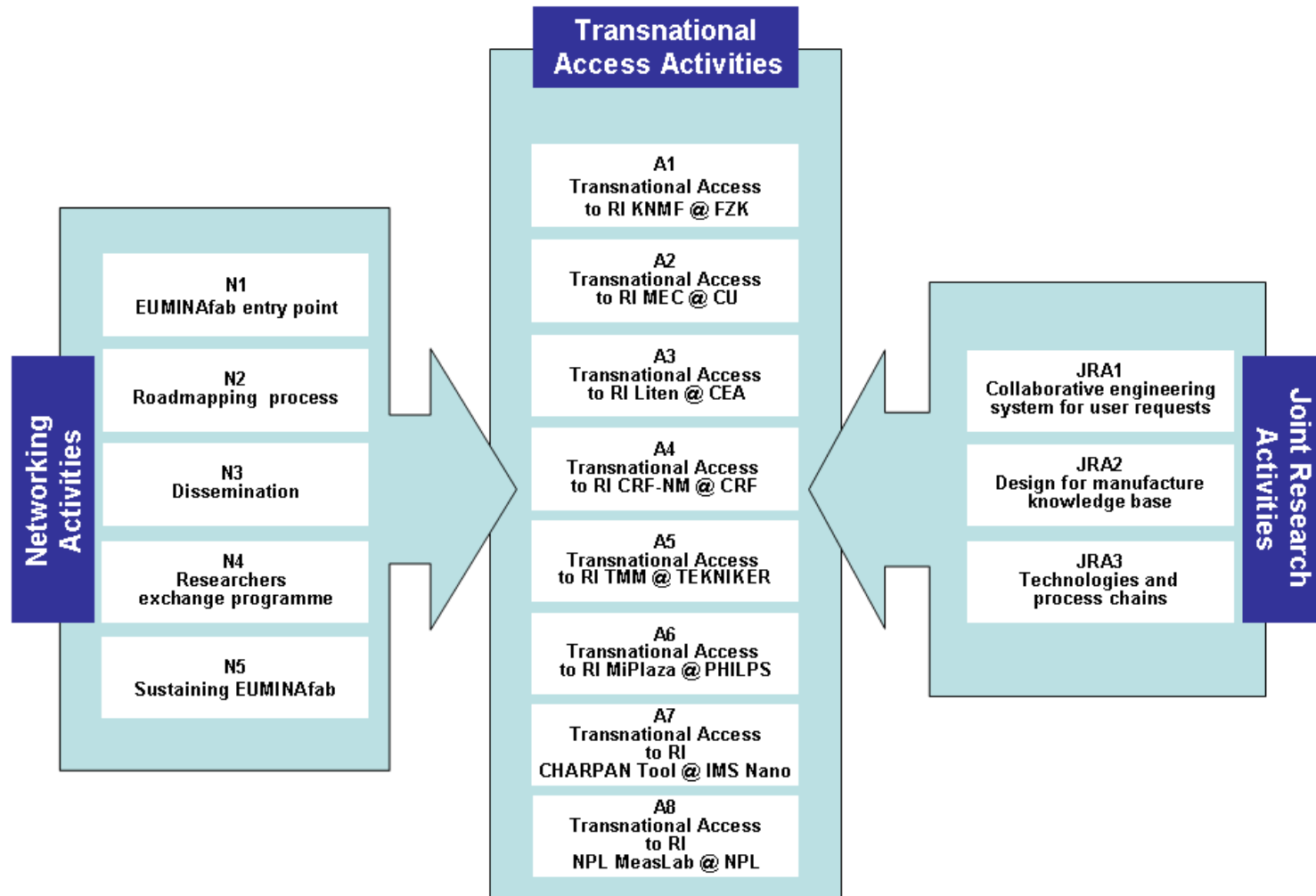
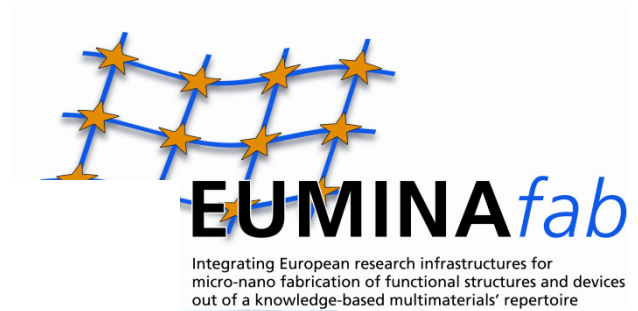
Perceive the demand of external institutions, *to use your technical infrastructure*

## **EUMINAfab the proposal**

- offering scientific expertise
- offering special technologies
- offering networking

- (**knowledge**) Joint Research Activities
- (**experiments**) Transnational Access Activities
- (**connections**) Network Activities

# EUMINAfab Project (complexity)

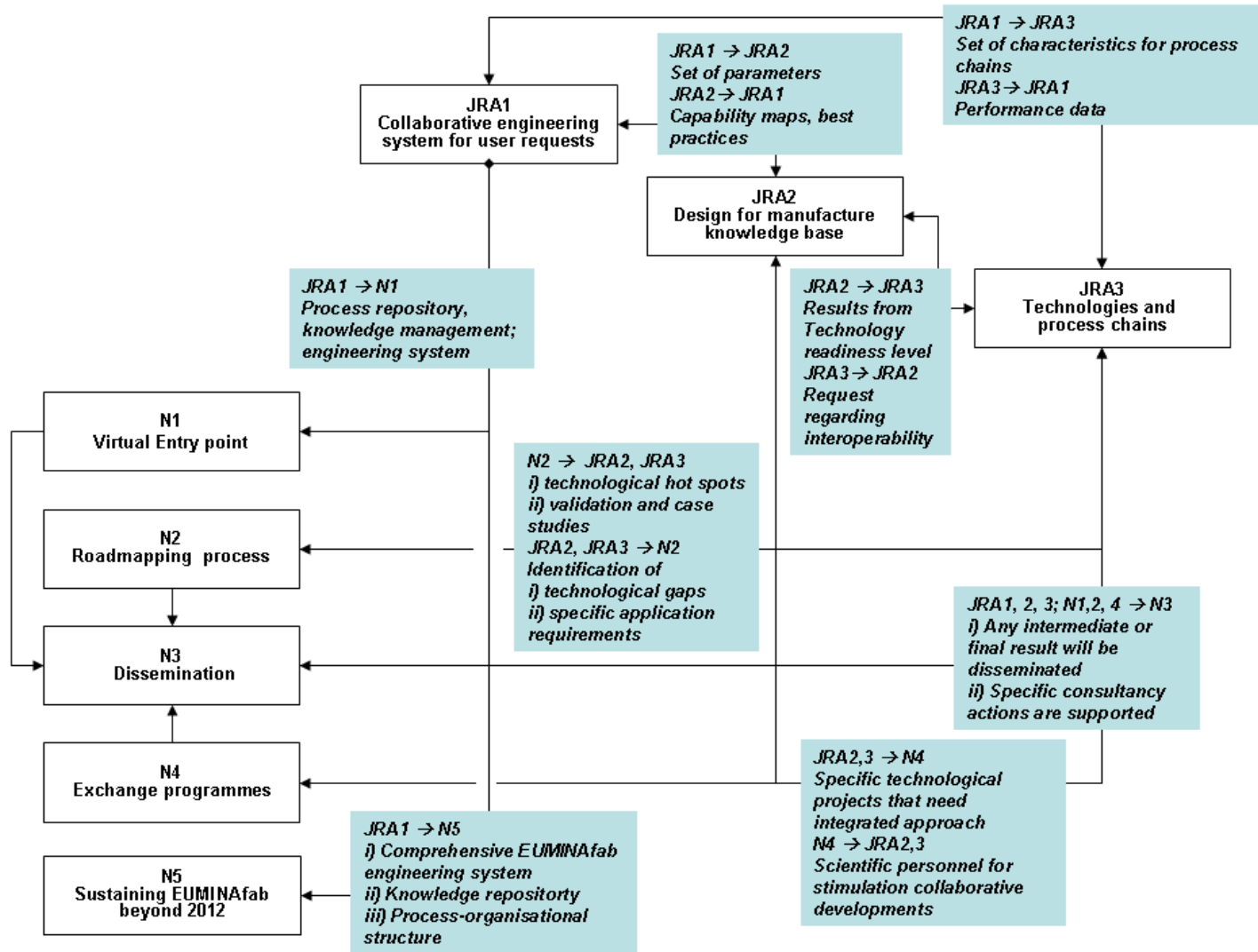




# EUMINAfab Project (interaction)



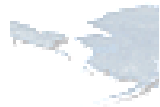
Integrating European research infrastructures for micro-nano fabrication of functional structures and devices out of a knowledge-based multimaterials' repertoire



# EUMINAfab tool box (idea)

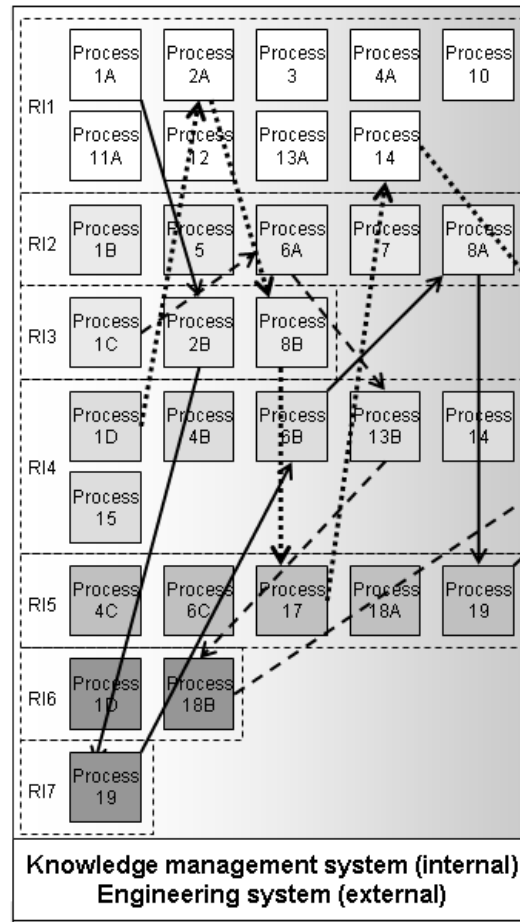


Integrating European research infrastructures for micro-nano fabrication of functional structures and devices out of a knowledge-based multimaterials' repertoire



- Ambient Assisted Living**
- Medical Diagnosis & personal health**
- Consumer applications & electronic devices**
- Intelligent textiles & clothes**
- Energy conversion & storage**
- Transport & mobility**
- Information & communication technology**
- Safety & defence**

- Rapid prototype
- Integrated microoptical system
- Nanostructured microfluidics
- Wear resistant surfaces
- High parallel 3D nanostructures
- Large format microcomponent
- Ultra precision metal part
- Soft magnetic nano structure
- Disposable micro part
- ...



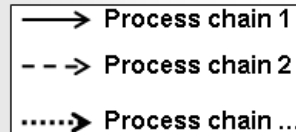
- Nano motor
- Ceramic micropump
- Extracorporeal artificial organ
- Cell screening system
- Energy harvesting systems
- Devices from conductive polymers
- Multifunctional integrated sensor system
- Integrated displays
- ...



*Typical application areas*

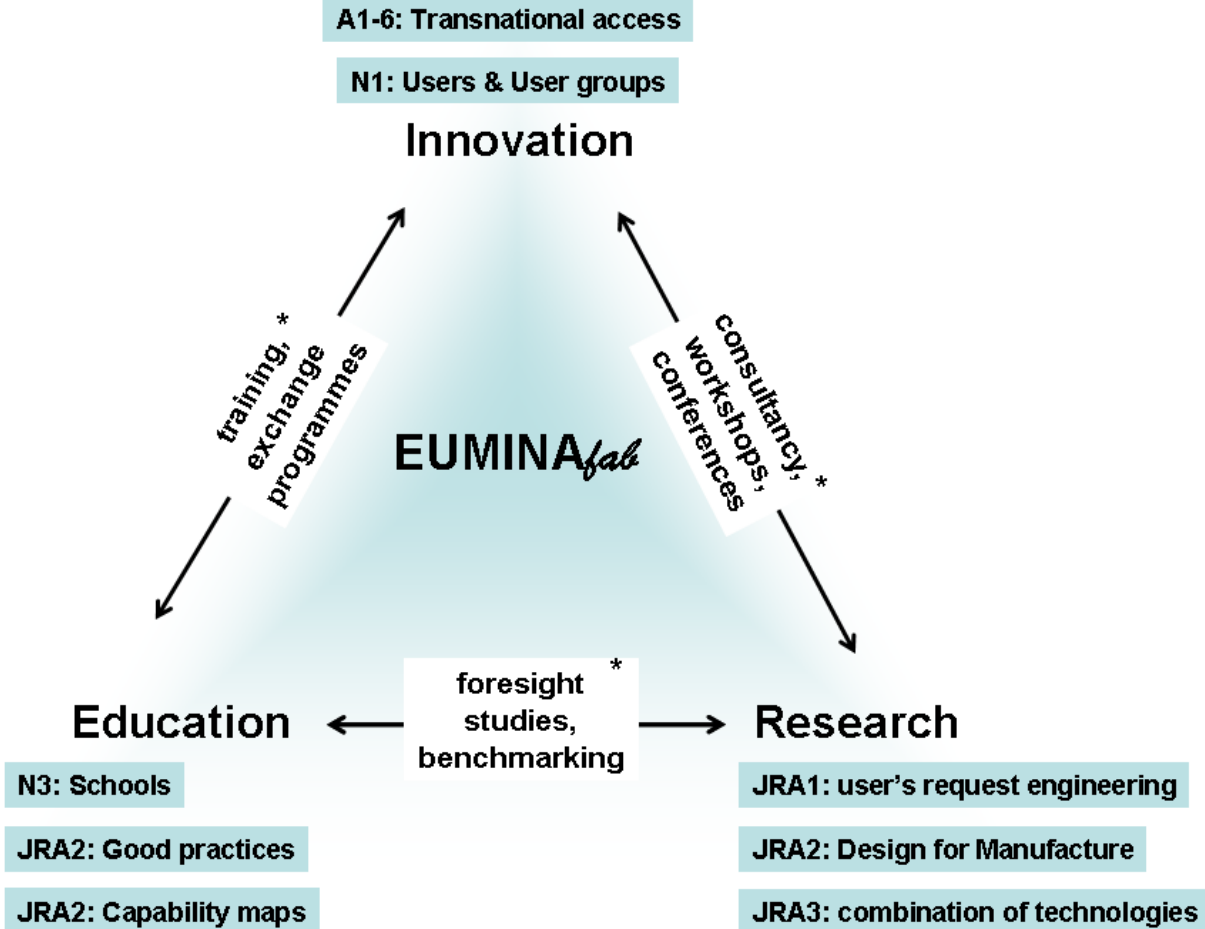
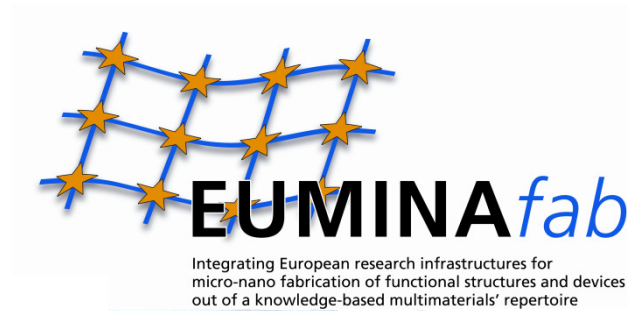
*Typical requests*

**EUMINAfab  
,tool box'**



*Exemplary expected results*

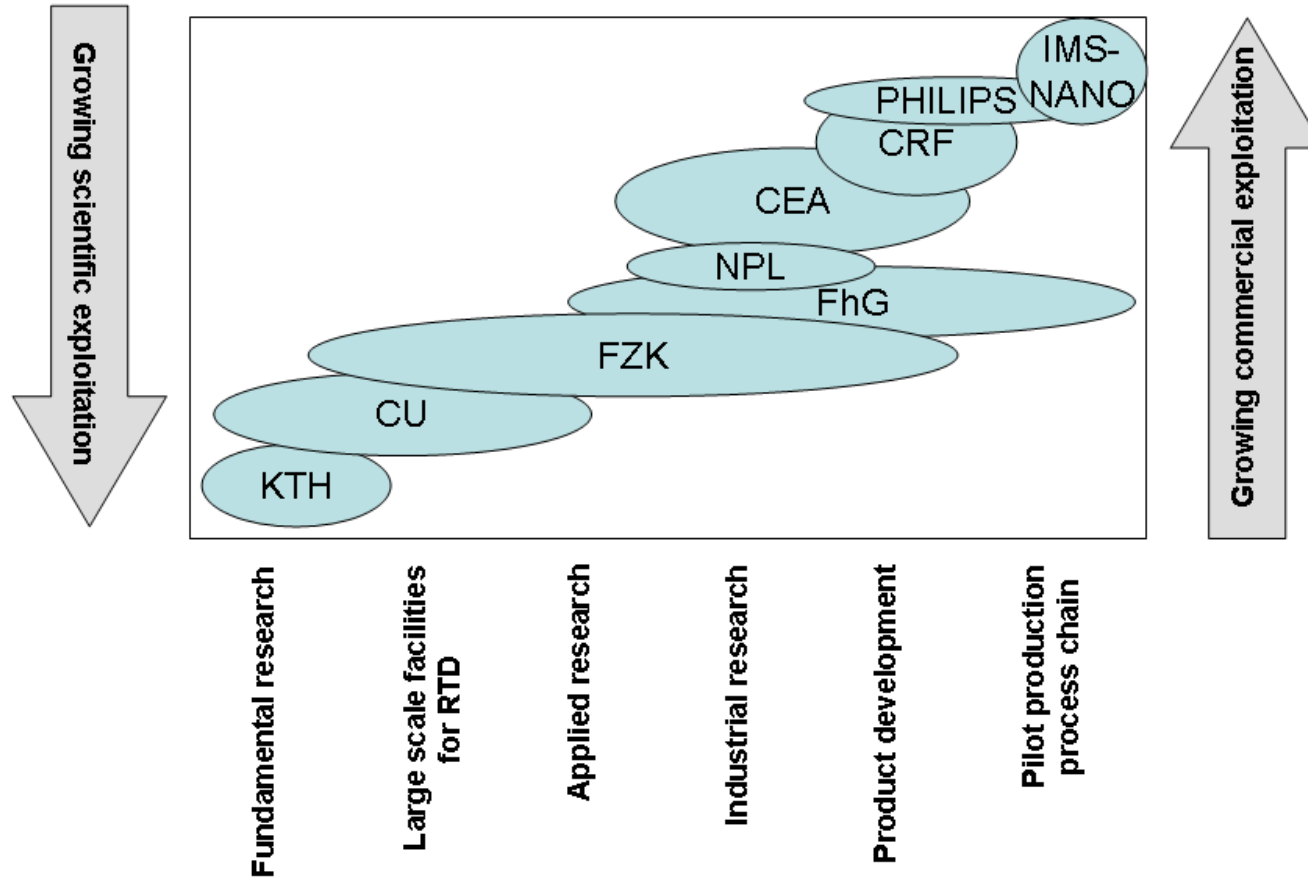
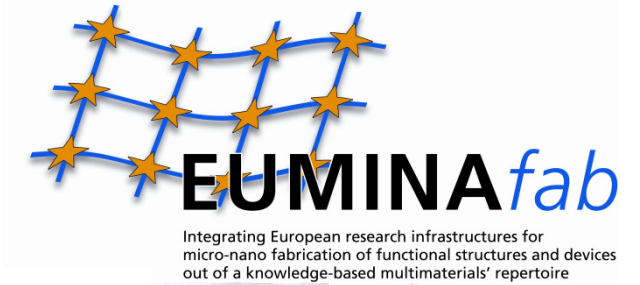
# EUMINAfab tool box (impact)



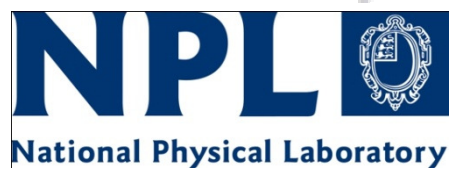
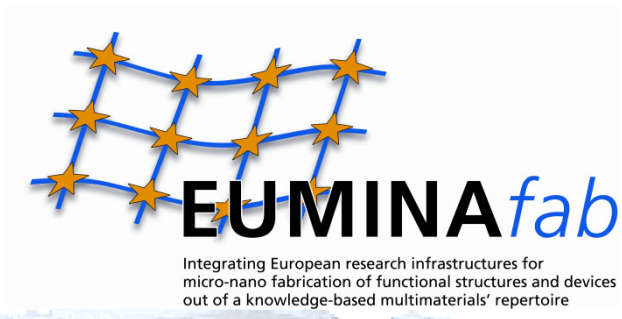
\* EUMINAfab activities



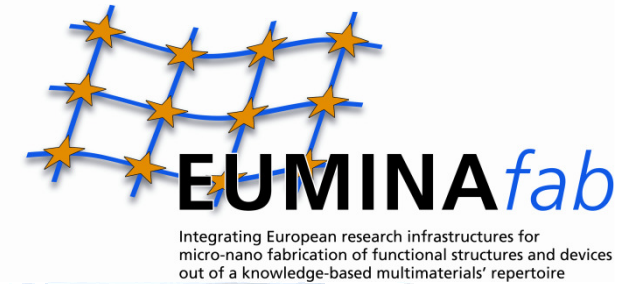
# EUMINAfab Project (consortium)



# EUMINAfab Project (consortium)



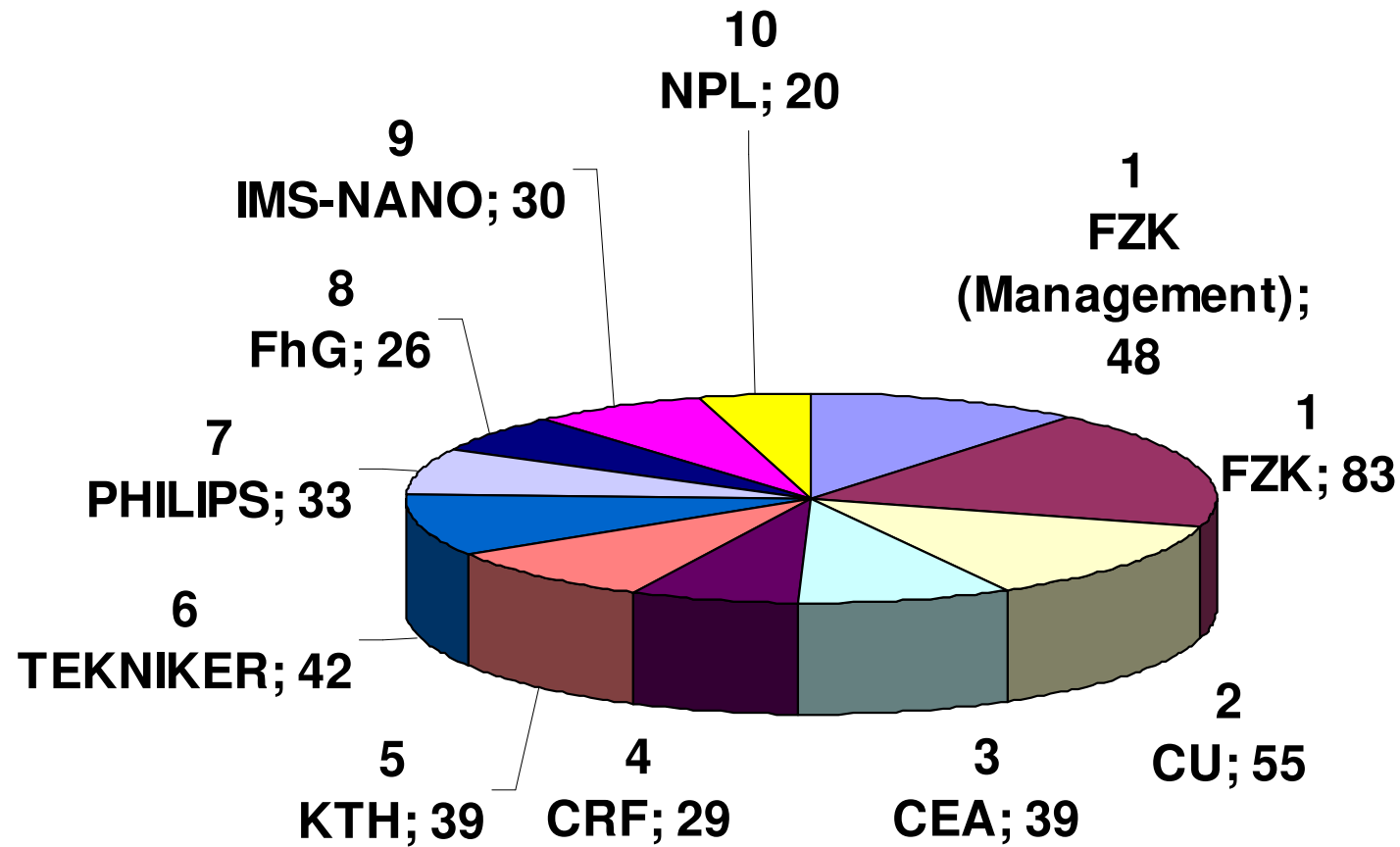
# EUMINA*fab* Project (beneficiaries)



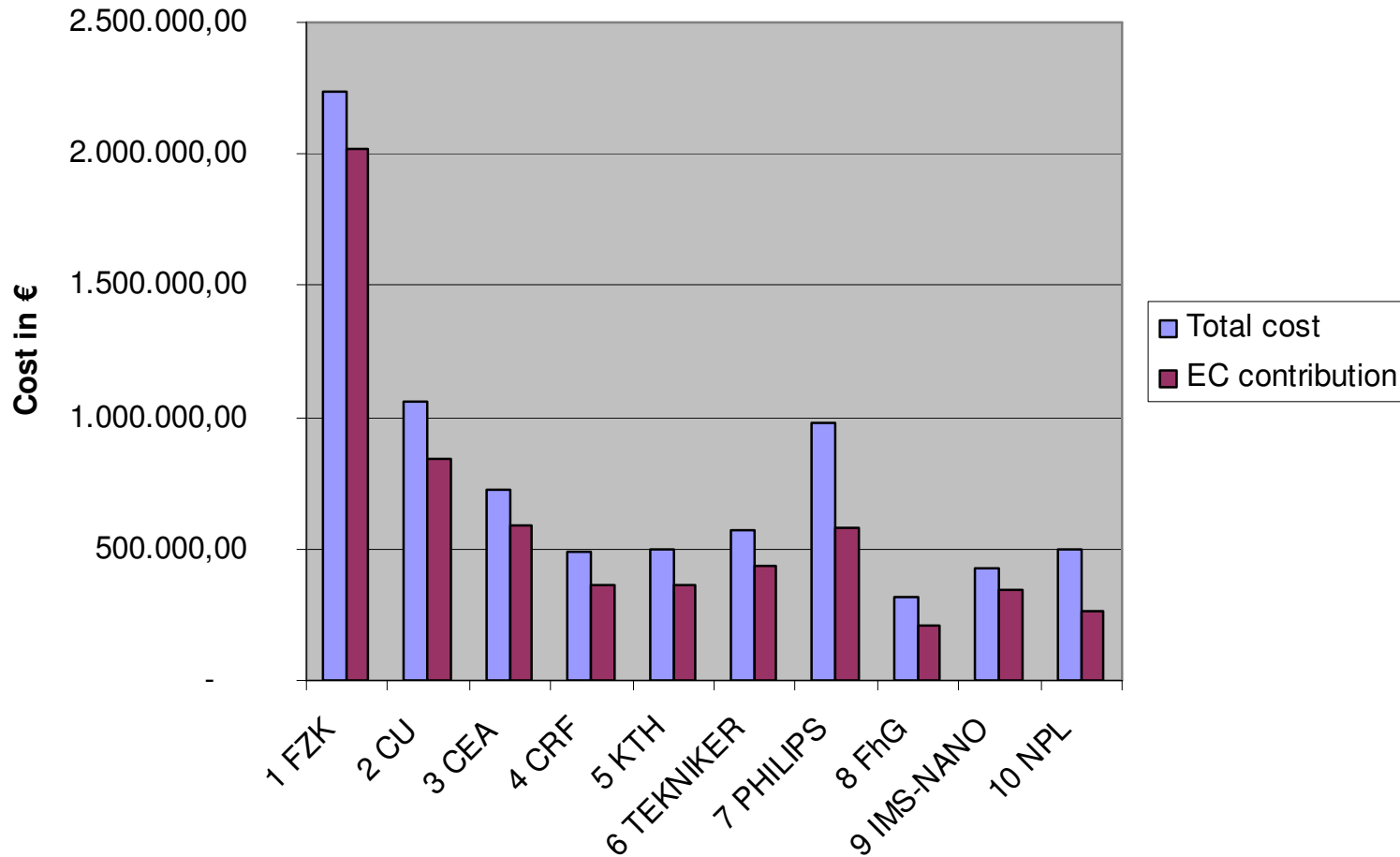
Beneficiary Number *	Beneficiary name	Beneficiary short name	Country	Date enter project**	Date exit project**
1(coordinator)	Karlsruher Institut für Technologie	KIT	Germany	M1	M48
2	Cardiff University	CU	United Kingdom	M1	M48
3	Commissariat à l'Énergie Atomique	CEA	France	M1	M48
4	Centro Ricerche FIAT S.C.p.A.	CRF	Italy	M1	M48
5	Kungliga Tekniska Högskolan	KTH	Sweden	M1	M48
6	Fundación TEKNIKER	TEKNIKER	Spain	M1	M48
7	Philips Research Europe	PHILIPS	The Netherlands	M1	M48
8	Fraunhofer Gesellschaft	FhG	Germany	M1	M48
9	IMS Nanofabrication AG	IMS-NANO	Austria	M1	M48
10	NPL Management Limited	NPL	United Kingdom	M1	M48



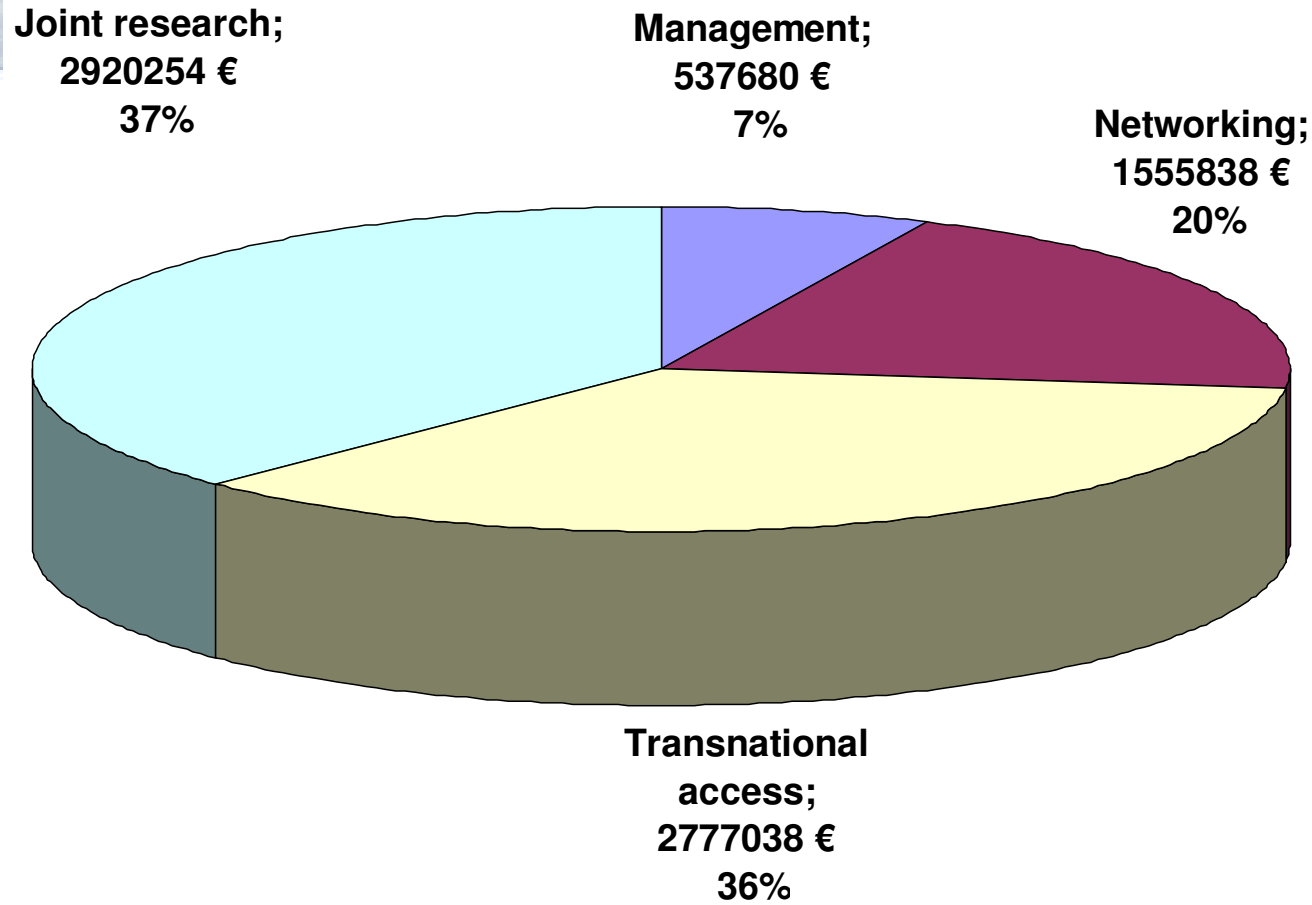
# EUMINAfab Project (resources committed)



# EUMINAfab Project (budget distribution)



# EUMINAfab Project (budget per activities)

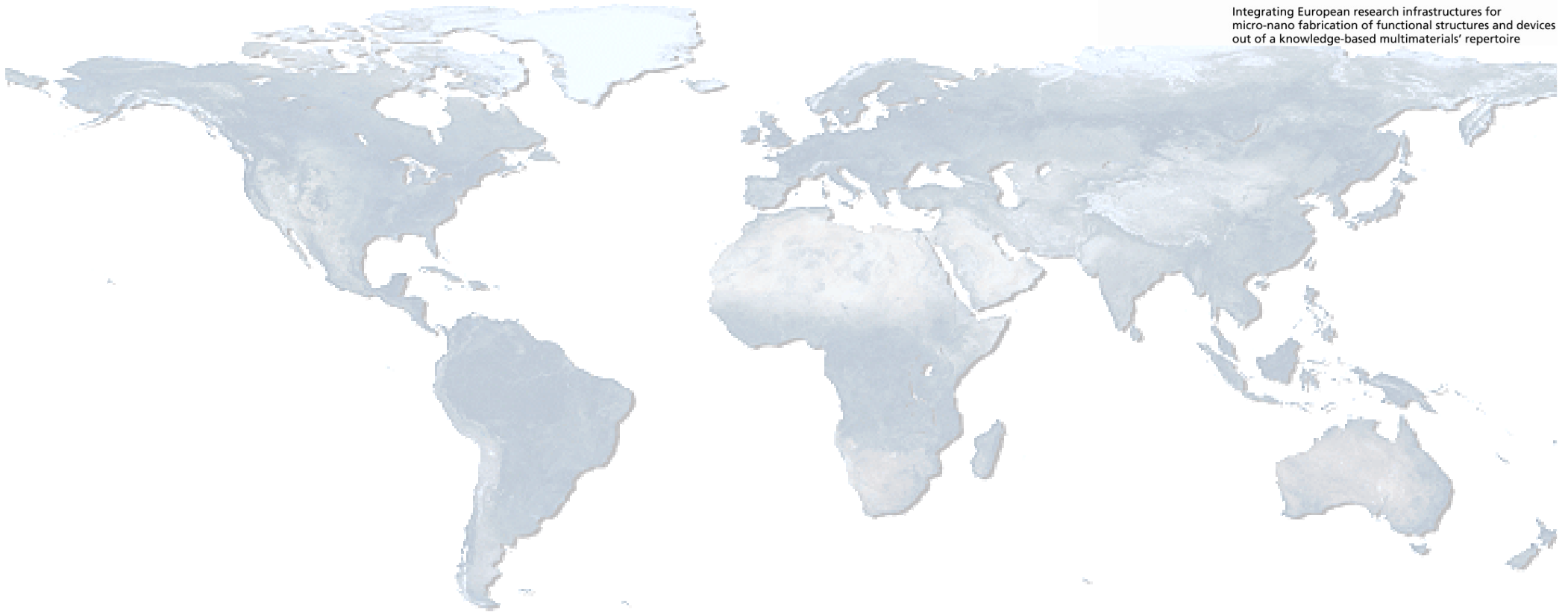




# EUMINA*fab* Project (scientific content)



Integrating European research infrastructures for micro-nano fabrication of functional structures and devices out of a knowledge-based multimaterials' repertoire



# EUMINAfab Project (work packages)

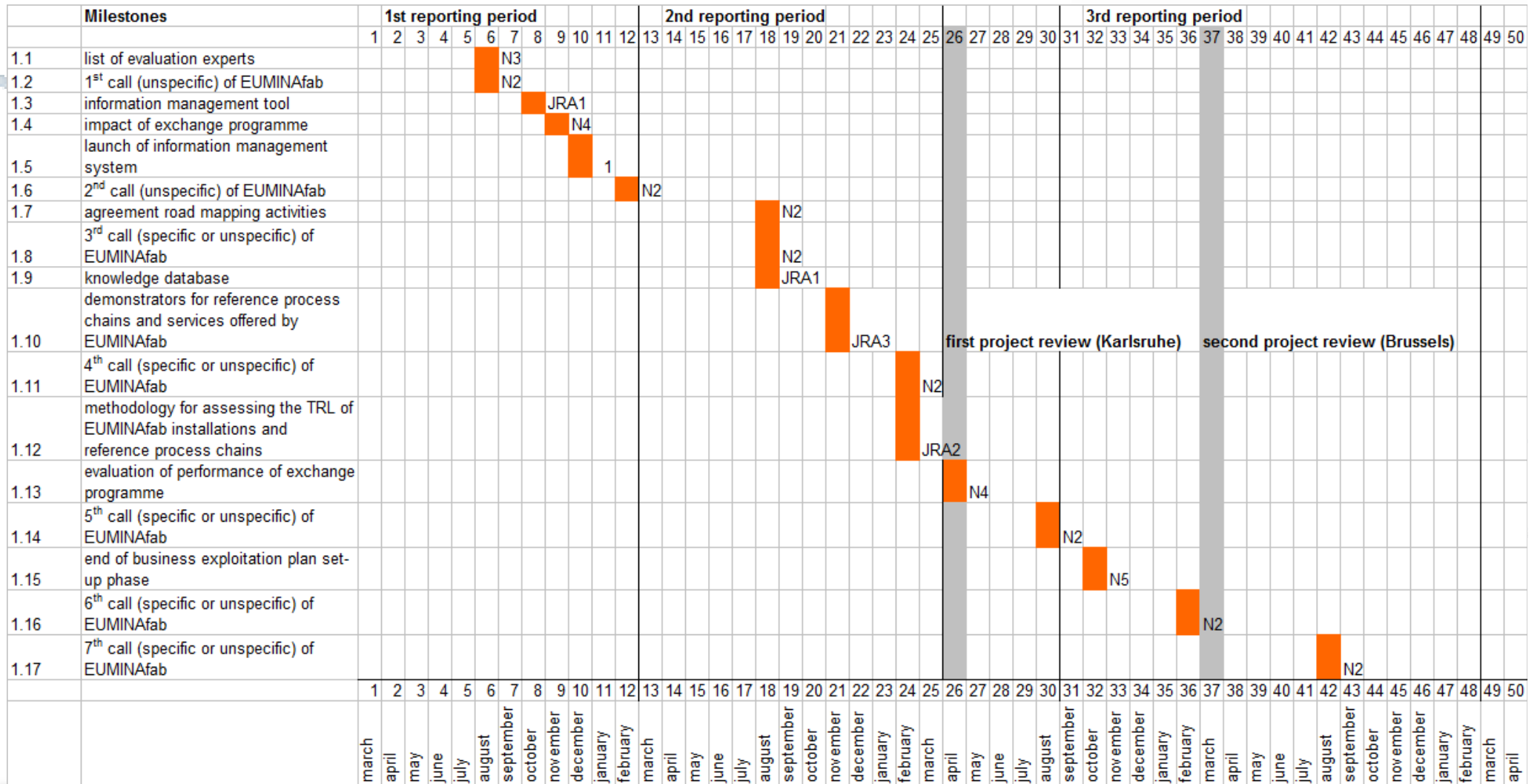


Integrating European research infrastructures for micro-nano fabrication of functional structures and devices

Work package/task title			Year 1					Year 2					Year 3					Year 4																																
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
<b>WP1</b>	<b>WP1</b>	<b>Management of the EUMINAfab consortium</b>	[Blue shaded cells]																																															
	WP1.1	Financial, legal and administrative project management	[Blue shaded cells]																																															
	WP1.2	Internal communication standards and continuous project monitoring	[Blue shaded cells]																																															
	WP1.3	Collecting of best practices in a EUMINAfab project handbook	[Blue shaded cells]																																															
	WP1.4	Progress reporting and a final report	[Blue shaded cells]																																															
	WP1.5	Preparation of detailed implementation plans	[Blue shaded cells]																																															
<b>WP2</b>	<b>N1</b>	<b>Entry point to EUMINAfab</b>	[Blue shaded cells]																																															
	N1.1	Operating the knowledge management system and the EUMINAfab portal	[Blue shaded cells]																																															
	N1.2	Enhancing the outreach of new users	[Blue shaded cells]																																															
	N1.3	EUMINAfab access services	[Blue shaded cells]																																															
	N1.4	EUMINAfab review procedure	[Blue shaded cells]																																															
<b>WP3</b>	<b>N2</b>	<b>Roadmapping process</b>	[Blue shaded cells]																																															
	N2.1	Data mining on multimaterial micro and nano technologies	[Blue shaded cells]																																															
	N2.2	Expert interviews	[Blue shaded cells]																																															
	N2.3	Foresight approach and case studies	[Blue shaded cells]																																															
<b>WP4</b>	<b>N3</b>	<b>Dissemination</b>	[Blue shaded cells]																																															
	N3.1	Training and schools	[Blue shaded cells]																																															
	N3.2	Regional consultancy	[Blue shaded cells]																																															
	N3.3	Workshops and conferences	[Blue shaded cells]																																															
<b>WP5</b>	<b>N4</b>	<b>Researchers Exchange Programme</b>	[Blue shaded cells]																																															
	N4.1	Definition and constitution of the Researcher Exchange Programme	[Blue shaded cells]																																															
	N4.2	Promotion of Researcher Exchange Programme	[Blue shaded cells]																																															
	N4.3	Development of activities during the exchange	[Blue shaded cells]																																															
	N4.4	Reporting and information database	[Blue shaded cells]																																															
<b>WP6</b>	<b>N5</b>	<b>Sustaining EUMINAfab</b>	[Blue shaded cells]																																															
	N5.1	Organisational structure	[Blue shaded cells]																																															
	N5.2	Business strategy and plan	[Blue shaded cells]																																															
	N5.3	Preparatory work towards an implementation of the integr. business plan	[Blue shaded cells]																																															
<b>WP7</b>	<b>A1</b>	<b>Transnational access to RI KNMF at FZK</b>	[Blue shaded cells]																																															
<b>WP8</b>	<b>A2</b>	<b>Transnational access to RI MEC at CU</b>	[Blue shaded cells]																																															
<b>WP9</b>	<b>A3</b>	<b>Transnational access to RI LTF at CEA</b>	[Blue shaded cells]																																															
<b>WP10</b>	<b>A4</b>	<b>Transnational access to RI CRF-MN at CRF</b>	[Blue shaded cells]																																															
<b>WP11</b>	<b>A5</b>	<b>Transnational access to RI TMM at TEKNIKER</b>	[Blue shaded cells]																																															



# EUMINAfab Project (milestones)





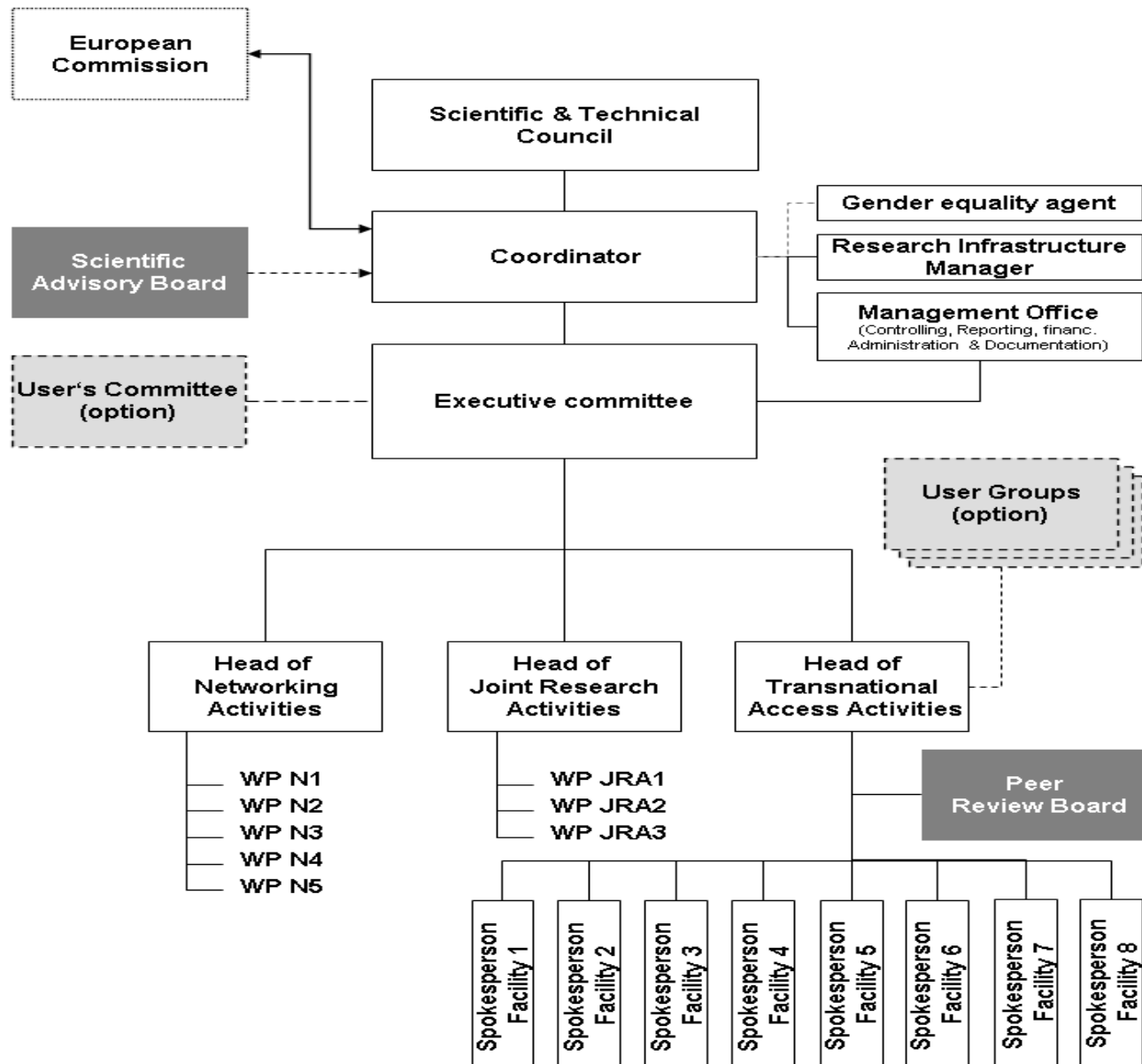
# EUMINAFab Project (deliverables)



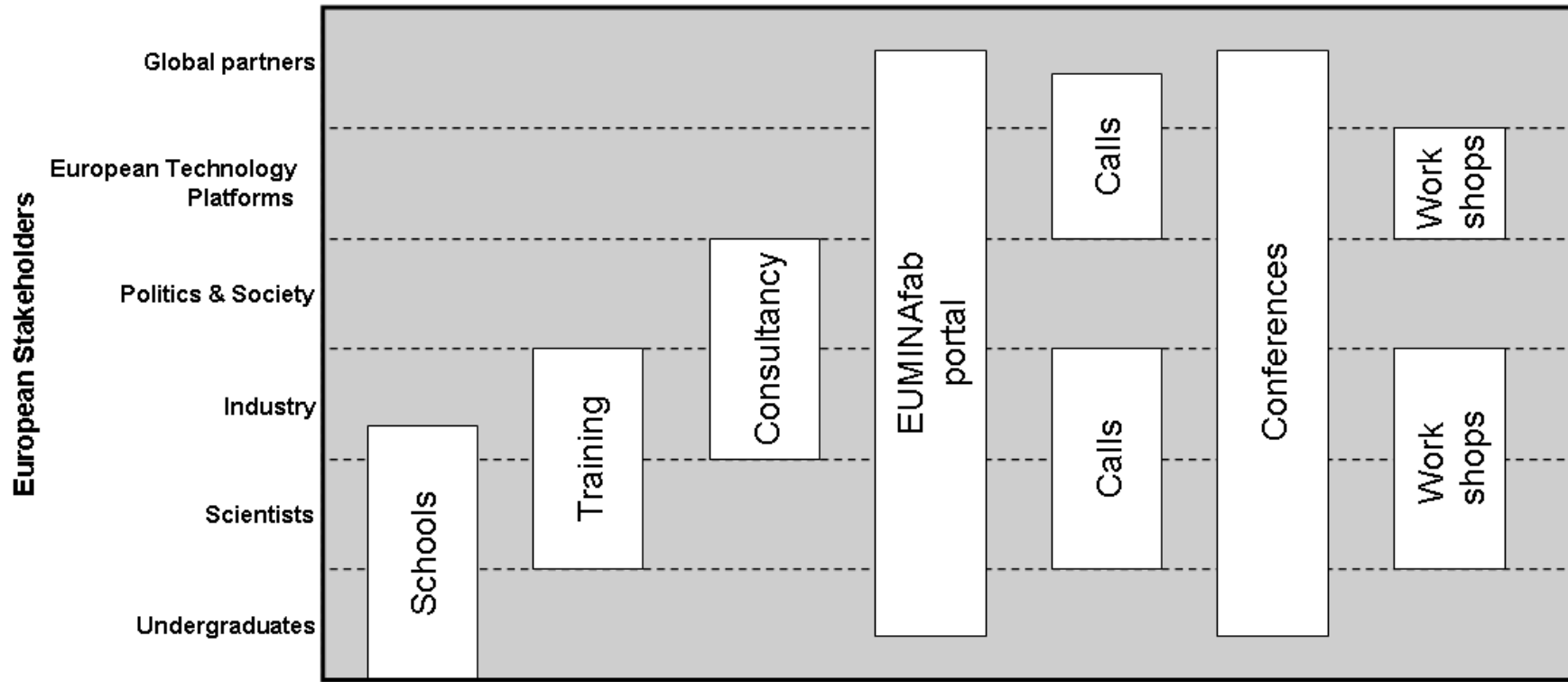
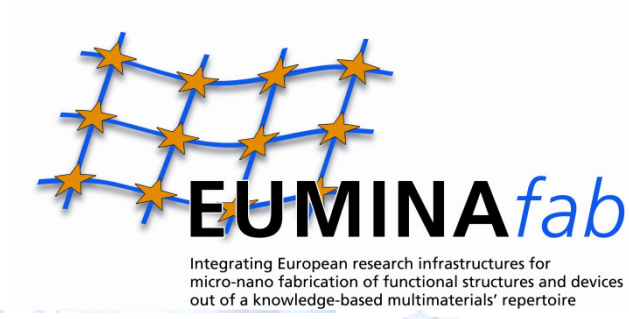
Deliverables (management and networking)	1st reporting period												2nd reporting period												3rd reporting period																									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
D1.1	1st periodic report												R report												R report																									
D1.2	2nd periodic report																								R report																									
D1.3	3rd periodic report (final)																								R report																									
D1.4	1st progress report												R report																																					
D1.5	2nd progress report																								R report																									
D1.6	3rd progress report																								R report																									
D1.7	standard handbook												R handbook																																					
D1.8	update standard handbook																								R update handbook																									
D1.9	O daily administrative management of the consortium																																																	
D1.10	O CA																																																	
D1.11	O implementation management office ...																																																	
DN1.1	O website																																																	
DN1.2	O guidelines																																																	
DN1.3	O person in charge infrastructures																																																	
DN1.4	O 1st call																																																	
DN1.5	O requirements knowledge systems																																																	
DN1.6	O 2nd call																																																	
DN1.7	R 1st statistics of usage																																																	
DN1.8	O 3rd call																																																	
DN1.9	O 4th call																																																	
DN1.10	R 2nd version "update DN1.5"																																																	
DN1.11	O 5th call																																																	
DN1.12	O 6th call																																																	
DN1.13	R 3rd version "update DN1.5"																																																	
DN1.14	O 7th call																																																	
DN2.1	O forecast material and questionnaire ...																																																	
DN2.2	R report on specific technological ...																																																	
DN2.3	R report on forecast material survey																																																	
DN2.4	R two roadmaps for two specific ...																																																	
DN3.1	O EUMINAFab roadshow 1st version																																																	
DN3.2	O booklet for regional consultancy																																																	
DN3.3	R report on feedback from workshops																																																	
DN4.1	R researcher exchange programme ...																																																	
DN4.2	O material for promotion of programme																																																	
DN4.3	R 1st report of researcher exchange ...																																																	
DN4.4	R 2nd report of researcher exchange ...																																																	
DN4.5	R 3rd report of researcher exchange ...																																																	
DN5.1	O integrated business plan EUMINAFab																																																	
DN5.2	O 2nd version "update DN5.1"																																																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
	march	april	may	June	July	August	September	October	November	December	January	February	march	april	May	June	July	August	September	October	November	December	January	February	march	april	May	June	July	August	September	October	November	December	January	February	march	april	May	June	July	August	September	October	November	December	January	February	march	april



# EUMINAfab Project (management)



# EUMINAfab Project (dissemination)



EUMINAfab Dissemination Instruments





## PROJECT INFORMATION

- Welcome to EUMINAfab
- Mission
- Partnership
- News
- Gender Equality

## SERVICES

- Technologies

## USER ACCESS

- Proposal submission
- Conditions of access
- Technology experts
- User Office
- Downloads
- EC Member & Associated States
- Meet EUMINAfab
- FAQ

## TRAINING & SCHOOLS

- Winter School - Nanocharacterization Techniques and Tools

## MEMBER'S AREA

- User Area
- EUMINAfab Intranet

# First Call Open



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SEVENTH FRAMEWORK PROGRAMME

FP7-INFRASTRUCTURES-2008-1

Integrating Activity

Grant agreement for: Coordination and Support Actions for Integrating Activities

Grant agreement no.: FP7-226460



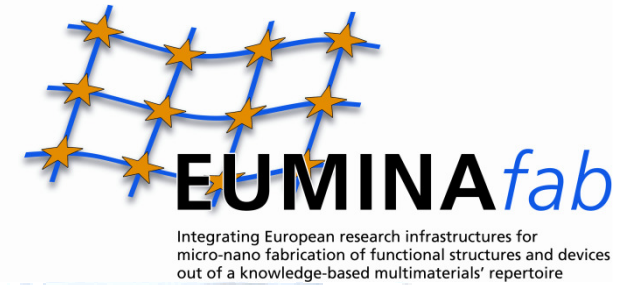
Winter School  
Nanocharacterization  
techniques & tools

# EUMINA*fab* Project (tips for success story)



- Don't set up and write the proposal alone! Create a group 4-6 persons
- Don't dedicate work, dedicate responsibilities!
- Define more than one person as internal Coordinator!
- Implement Colloques which are familiar with European Framework Program
- Respect the requests of the Commission! Guidelines
- Be exact and perfect in the wording and language (easy language)
- Talk about the future not about the past!
- Set high demands on yourself and your proposal!
- ...
- ...

# Further Information on EUMINA*fab*



<http://www.euminafab.eu>



# EUMINA*fab*

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# EUMINA*fab*

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