



INSPIRATION – Spatial Data Infrastructure in the Western Balkans



INSPIRE – Business opportunities and risks

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Basic message

- INSPIRE creates business opportunities
 - For public sector
 - For private sector
 - For citizens / public
 - For universities
 - For research institutes
 - For Community institutions
 - For international organizations



Basic message: INSPIRE creates business opportunities



- Public sector, national
 - Government ministries
 - Authorities
/Directorates
/Administration
/Gov. Agencies
 - Local government
 - Publicly owned companies
- Citizens / public
- Private business
 - GIS solution providers
 - Software companies
 - Telecom providers
 - Cloud service providers
 - ...
- Universities
- Research institutes
- Community institutions





Basic message

■ Risks

- INSPIRE implementation will concentrate only on fulfilment of legal obligations for member states (e.g. Implementing Rules, etc.)
- INSPIRE regulatory framework will grow to the size difficult to follow
- INSPIRE does not target the real needs
- Inspire is not flexible enough to catch with new needs
- Total cost of ownership of an SDI is ignored





INSPIRE Directive

- Technical directive in its big part
- Most of the recent discussion focused on pricing & licensing



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Original INSPIRE Data Policy Idea

- Public Sector Geographic Information should be available **free of charge** for use by **Public Authorities & Community Institutions**
- Go beyond existing European Directives
 - Access to Environmental Information
 - Re-use of Public Sector Information
- Feasibility of that seemed to be an issue
- Shift
 - ‘Removing obstacles at point of use’
 - Distinguishing between different types of services
 - Allowing for exceptions (‘derogations’)
 - A more flexible approach



INSPIRE Directive - Data Policy



- Full flexibility
 - free of charge → reasonable return on investment
- Consistent with existing EU laws
- Consistent with public authorities' IPR
- Focus on data sharing
 - between public authorities
 - for public tasks that may have an impact on the environment



INSPIRE Directive - Data Policy



- Some Network Services free of charge
 - Discovery Services
 - View Services
- Charges can be made for View Services
 - To cover the costs of maintaining the services or the data (large volumes, frequently updated)
- Restricted access possible because of:
 - Confidentiality
 - Security
 - Intellectual Property Rights
 - Commercial re-use
- In case of charges, e-Commerce services are mandatory



INSPIRE Directive - Data Policy



- Clauses for Community Institutions & Bodies
 - “Spatial data sets and services provided by Member States to Community institutions and bodies in order to fulfil their reporting obligations under Community legislation relating to the environment **shall not be subject to any charging**” (Article 17(3))
 - “Member States shall provide the institutions and bodies of the Community with access to spatial data sets and services in accordance with **harmonized conditions**” (Article 17(8))





INSPIRE Data Policy - The debate

- Much variation across Europe
 - From government funded to user pays models



Government funded

User pays

- 'Free' to all
- Centrally funded

- Government
- Private companies
- Citizen



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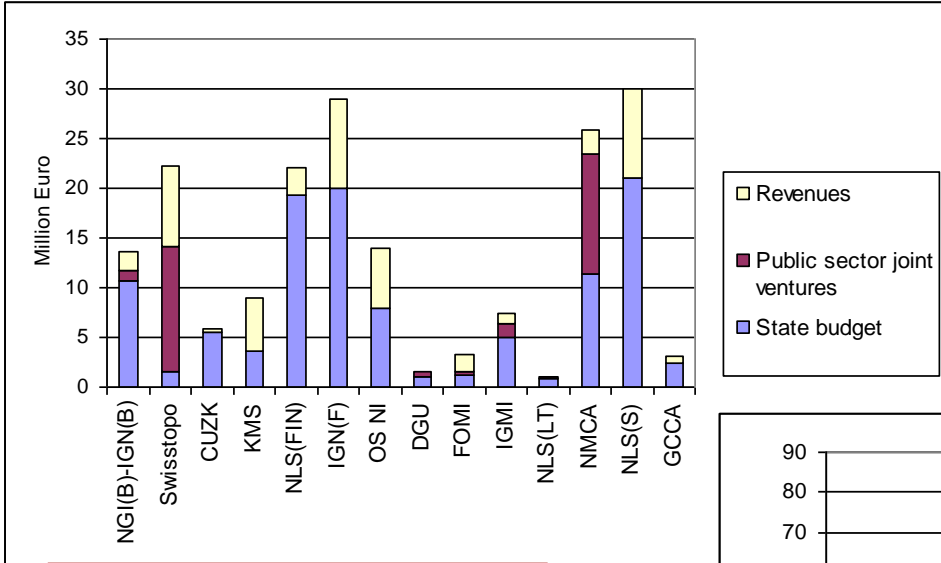


INSPIRE Data Policy - The debate

- Different policies originate from differences in
 - Culture
 - Geography
 - Legal system
 - Political direction
 - Organizational models: central-local; public-private
 - GI Market
 - Existing business models/cases
- Debate driven by the funding models of the National Mapping & Cadastral Agencies
 - Providers of the Annex I data

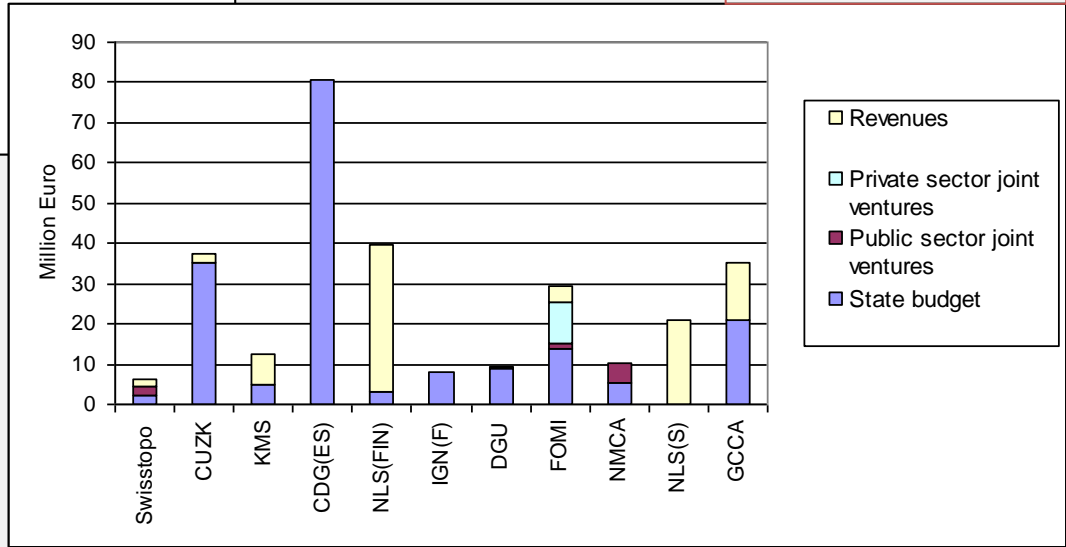


NMCA Business Model Survey (EuroGeographics 2006)



Funding for Topographic Mapping

Funding for Cadastre



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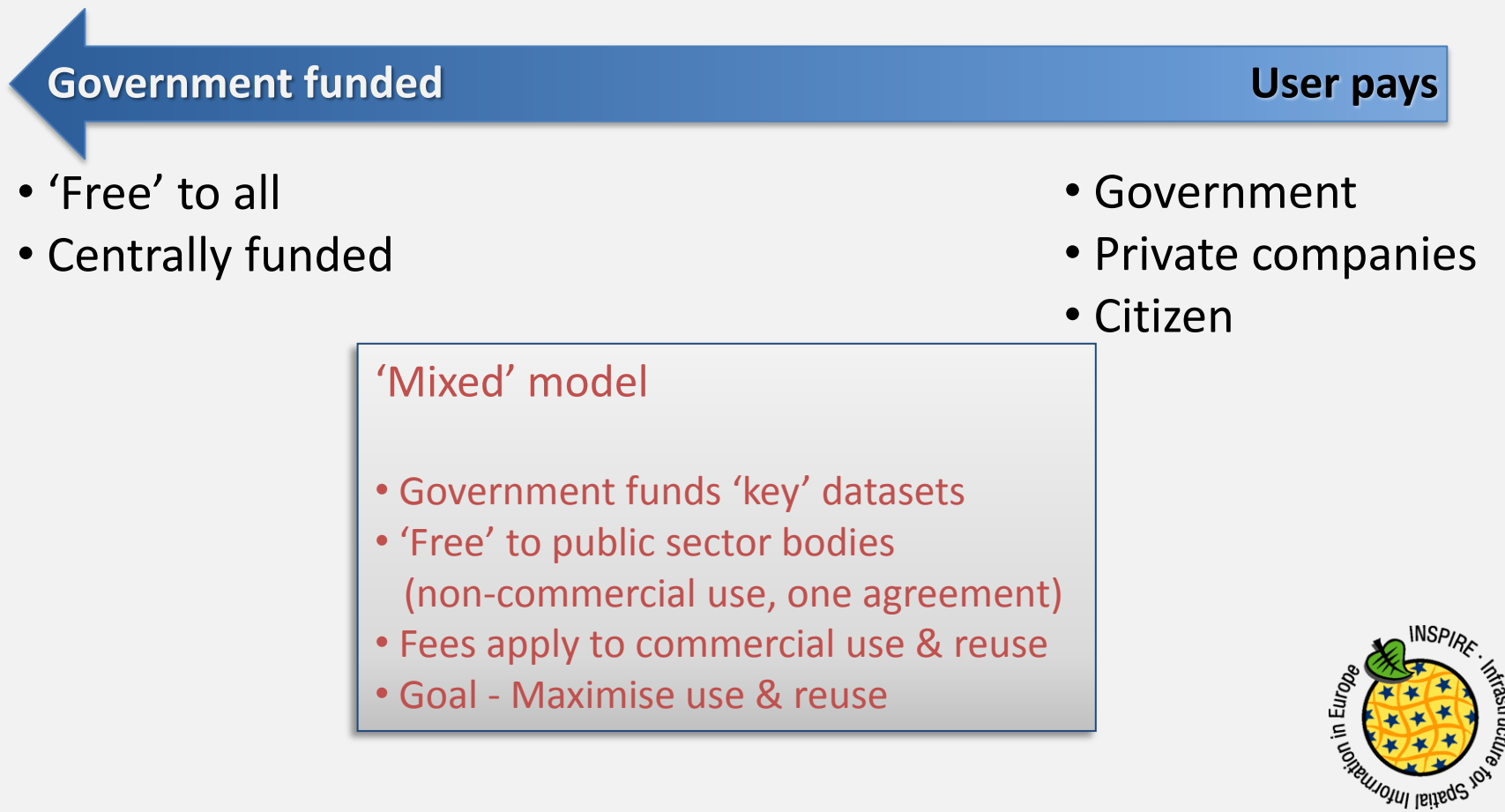
NMCA Business Model Summary

- Very difficult to compare, but can summarise 3 different models:
- **Government funded, data free to all**
 - Small scales mapping & satisfying public task/statutory responsibilities
 - Examples included USA, Canada, New Zealand
- **Mix of government funded & user payment**
 - All scales of mapping, mix of users in both the public & private sector
 - Majority of NMCAs
 - Data free for government, private sector pays
- **Market based pricing, no government funding**
 - Large scale mapping the primary focus, mix of users
 - Ordnance Survey GB
- Value Added Resellers an important channel to market in all models





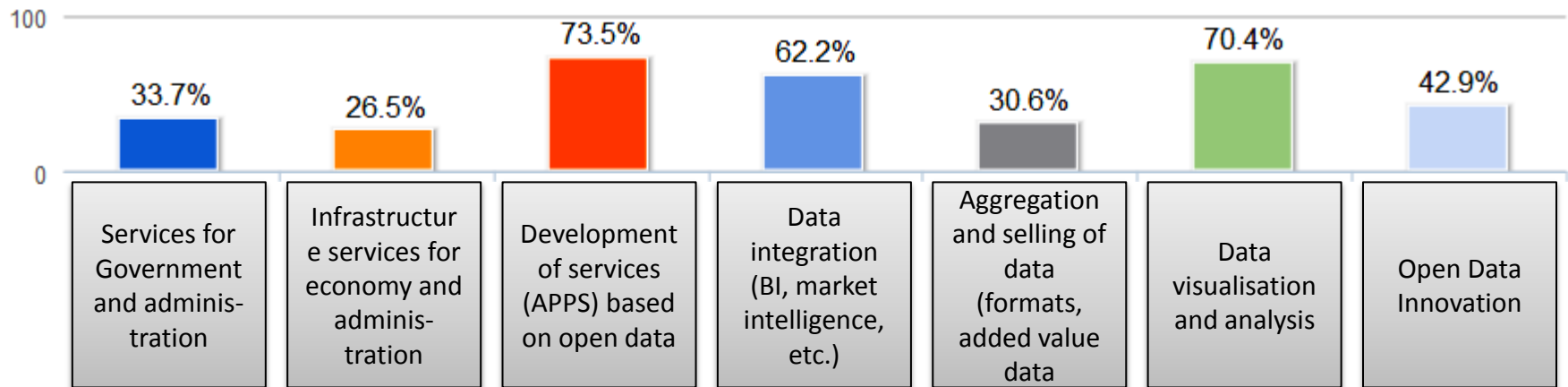
INSPIRE Data Policy – EU Trend





Efficiency

- Efficiency & Effectiveness
 - Economic potential of OGD



Source: OKFN/ Futurezone.at, 2012, S. 4. (translation from German done by C. Ansoerge)



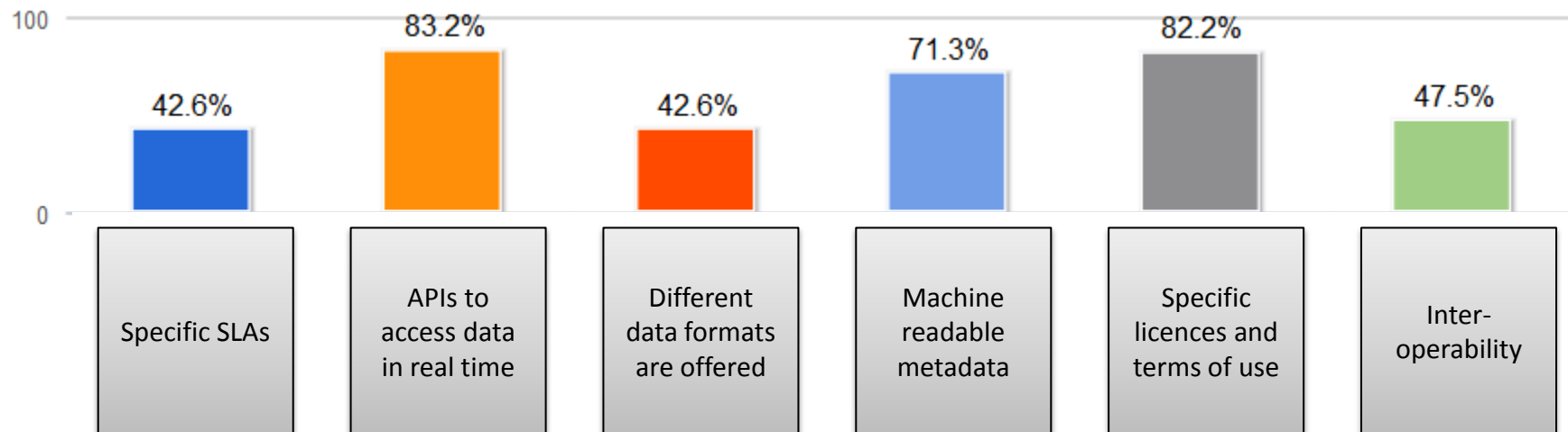
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Efficiency

- Efficiency & Effectiveness
 - Success criteria for specific business models



Source: OKFN/ Futurezone.at, 2012, S. 4. (translation from German done by C. Ansoerge)



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Case Catalonia – economic impact

- 2007: First report on socioeconomic impact
- Sample population of 20 municipalities of 100 end user municipalities + Other 12 organizations
 - benefits from municipalities (2006)
- former survey results
 - Direct costs: 2 years preparation + 3 years operational = **1.5 M €**
 - (considered) Benefits from internal efficiency = **2,6 M € / year (2006)**
 - ROI = 6 months
 - Social and politic impacts: Digital gap reduction, sharing culture, transparency...





Case Catalonia – economic impact

- Present survey 2011
 - 2007 study: 544.300 inh. 100 Users
 - 2011 study: 741.500 inh. 432 Users
- Time saved in internal processes:



Number of inhabitants	Number of municipalities	hours/month	h/month per municipality
< 20,000	10	148	14,80
20,000-50,000	6	19	3,17
50,000 <	4	10	2,50
Total:	20	177	9,00





Case Catalonia – economic impact

- Time saved by fewer queries requiring presence in offices:
4.5 h/month
- Time saved by citizens (not considered):
3-5 h/month by individuals visiting local offices
- Applying this results to the total population (432 municipalities):
- Total benefits (time savings) = **2.7 M €/year**
- R.O.I.=6.5

Source: IDEC, Barcelona



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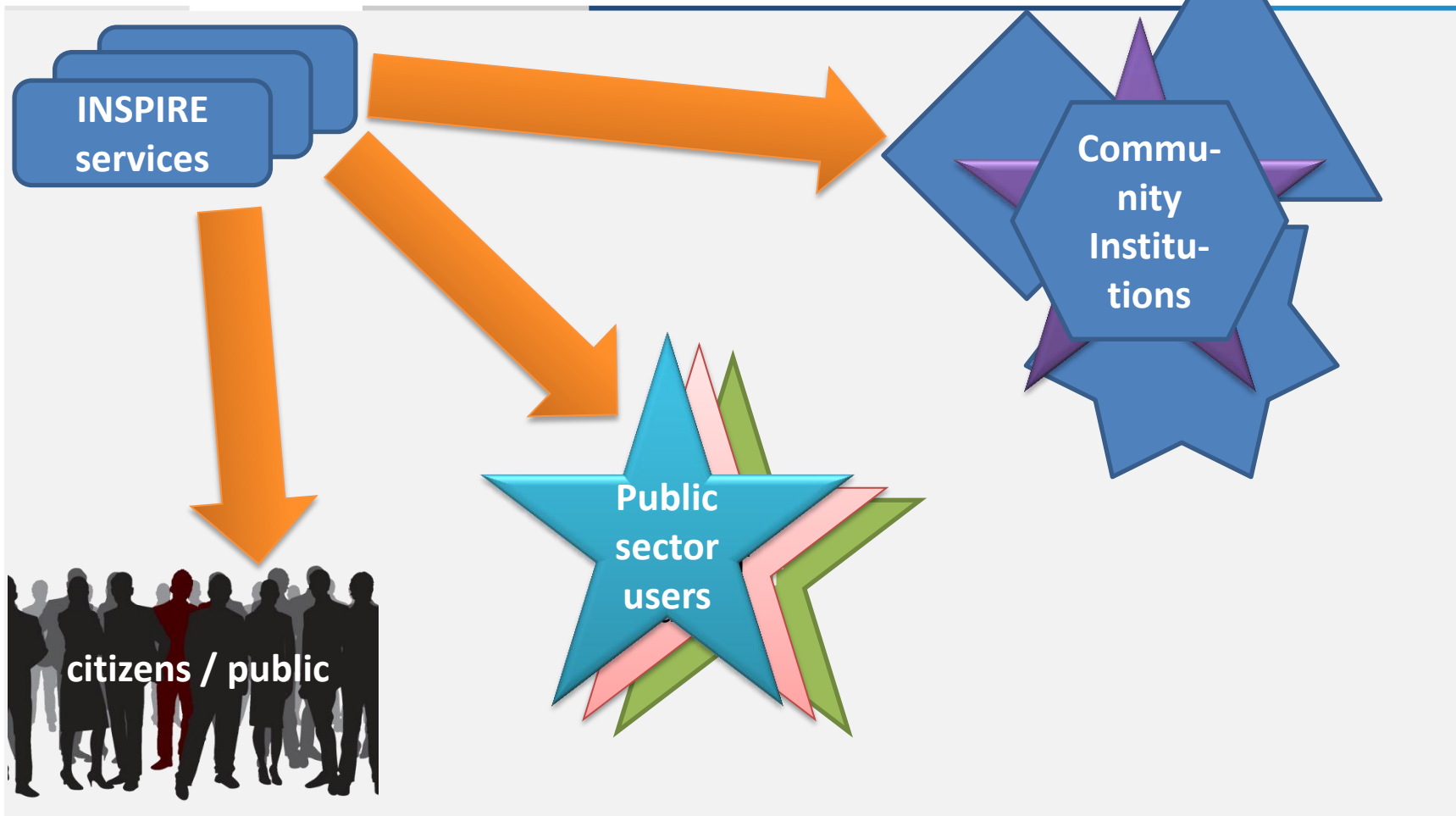


INSPIRE operations

- Share spatial data and services
 - Publish metadata
 - Publish interoperable mapping and data services
- Find suitable spatial data and services
- Engage /use/ services in applications
 - To create a value added product (map)
 - To collect spatial locations of features
 - To serve a mashup application (map + linked data)
 - (To transform spatial data)



Public sector only

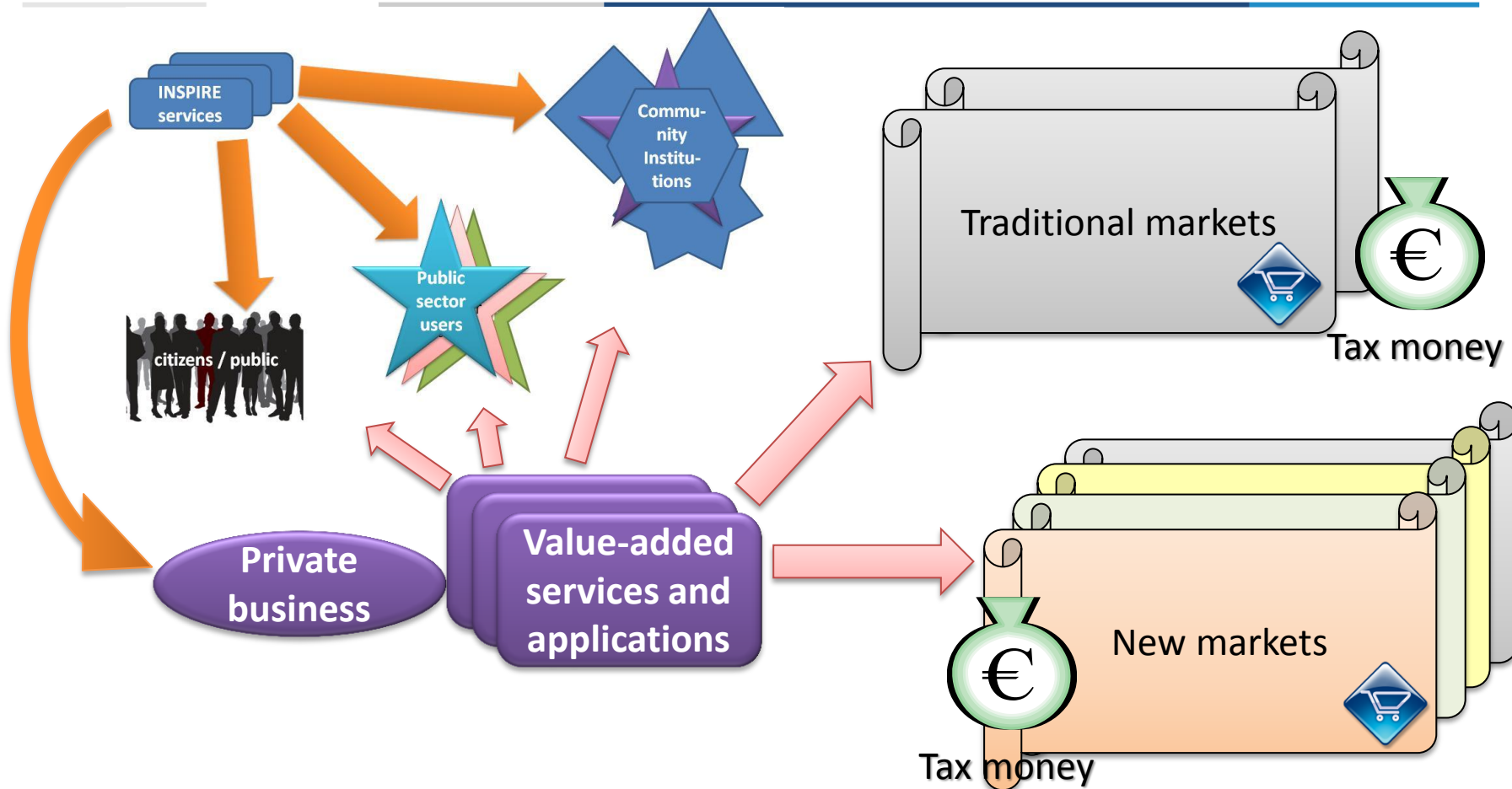


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Business interest



Value added services and applications



- Cloud services
 - Software as a Service (SaaS)
 - Platform as a Service (PaaS)
 - Infrastructure as a Service (IaaS)
- Service centers / cooperation model
- Traditional GIS applications
- New kinds of (mash-up) applications that were not originally foreseen
 - Combine existing SDI/INSPIRE and other services





Markets

- Traditional GI markets
- Smartphone and tablet applications
- Social networks
- “Big data” market
- ...
- Innovation





What opportunities for NMCA's

- Find new markets / customers
- Revenue
- Develop new products and brands



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INSPIRE business opportunities

- For public sector
 - More effective delivery of services to citizens, business, public administration
 - More informed public participation
 - Innovation
 - More transparency
- For private sector
 - the creation of added values through enhanced services
 - generating more jobs
- For universities and research institutes
- For European Community institutions





Risks

- INSPIRE implementation will concentrate only on fulfilment of legal obligations for member states (e.g. Implementing Rules, etc.)
 - Private sector will not use its potentials
- INSPIRE regulatory framework will grow to the size difficult to follow
 - The amount of the documentation will increase to the extent that overwhelms benefits (example: INSPIRE library - about 15.000 pages 2002-2012)
 - Software producers will give up developing solutions that respond to all so complex requirement
- INSPIRE does not target the real needs





Risks

- Inspire is not flexible enough to catch with new needs
 - Parallel development
 - Parallel technology not considered by INSPIRE
- Total cost of ownership of an SDI is ignored
 - implementation costs for setting up the SDI, especially for making the data available in an interoperable form
 - “running” the SDI over a period of 5-10 years results in additional costs which are often ignored (even complete change of the underlying technology)





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