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Global innovation network

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PATENT STATISTICS, INNOVATION MANAGEMENT AND IPR

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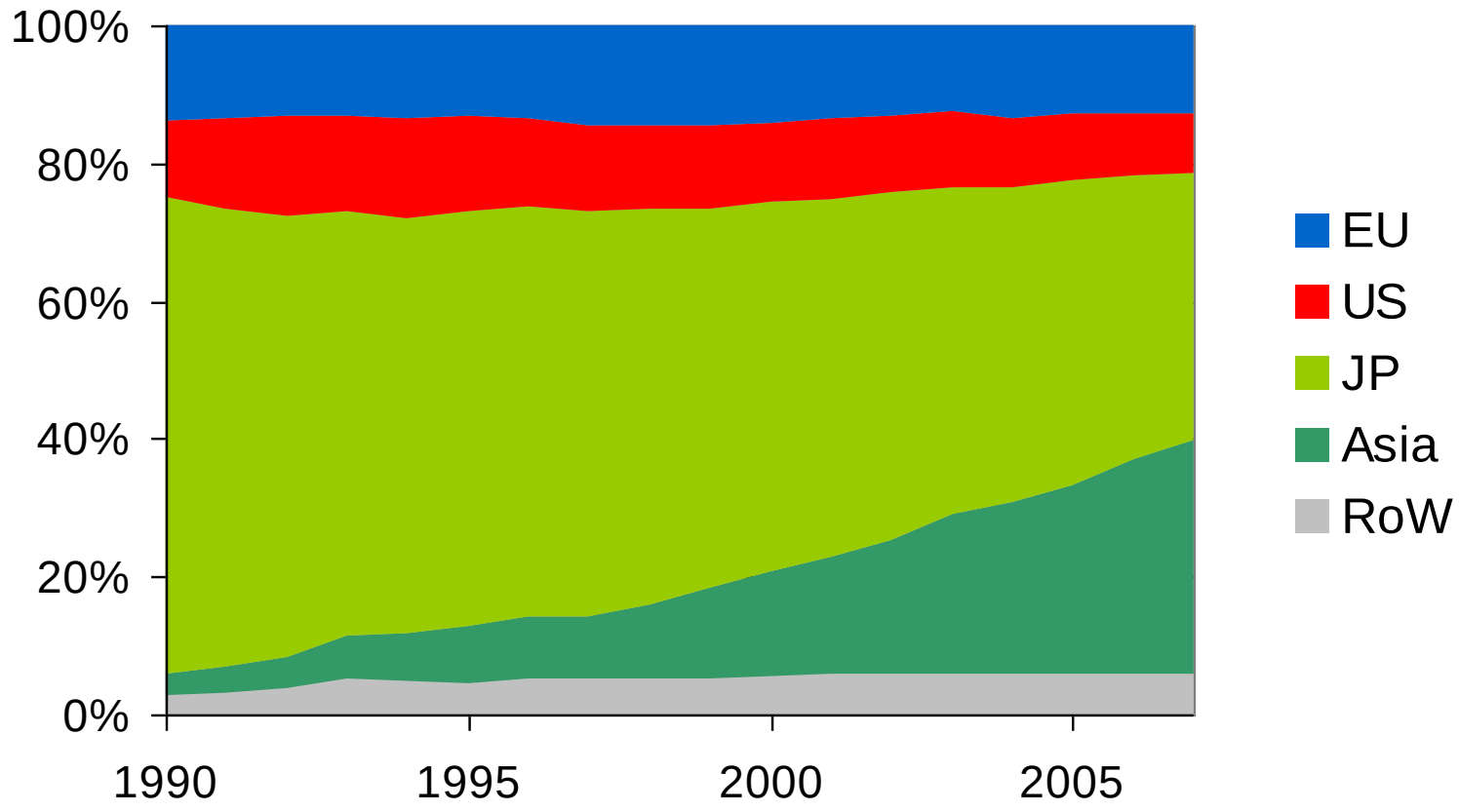
Why do we speak about innovation networks?

- New locations of innovation
- Doing innovation abroad
- Nexus of linkages between countries

-> Global innovation network

New locations of innovation

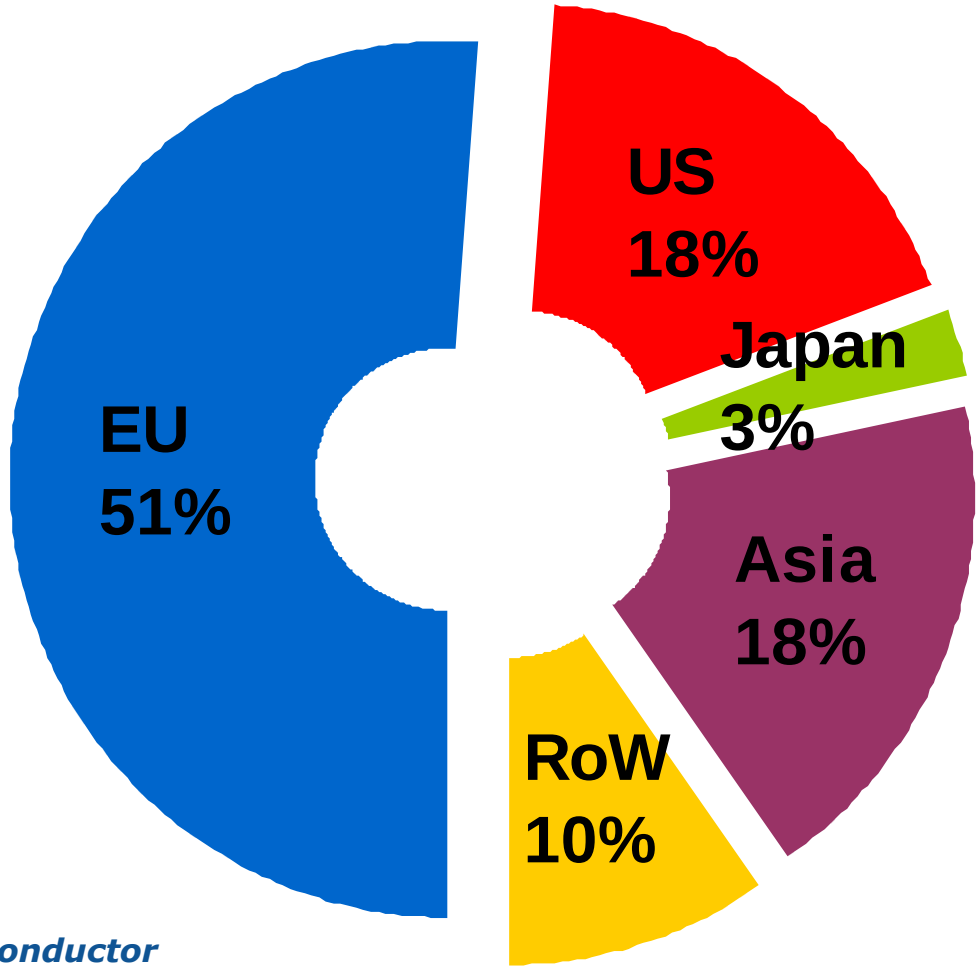
Number of patent applications by inventor location



Source: De Prato, Nepelski, et al., 2011

Doing innovation abroad

Location of R&D centres of EU high-tech firms* in 2010



** Based on IHS iSuppli dataset of semiconductor supply chain and industry*

Source: De Prato, Nepelski, et al., 2011

Global innovation network: methodology

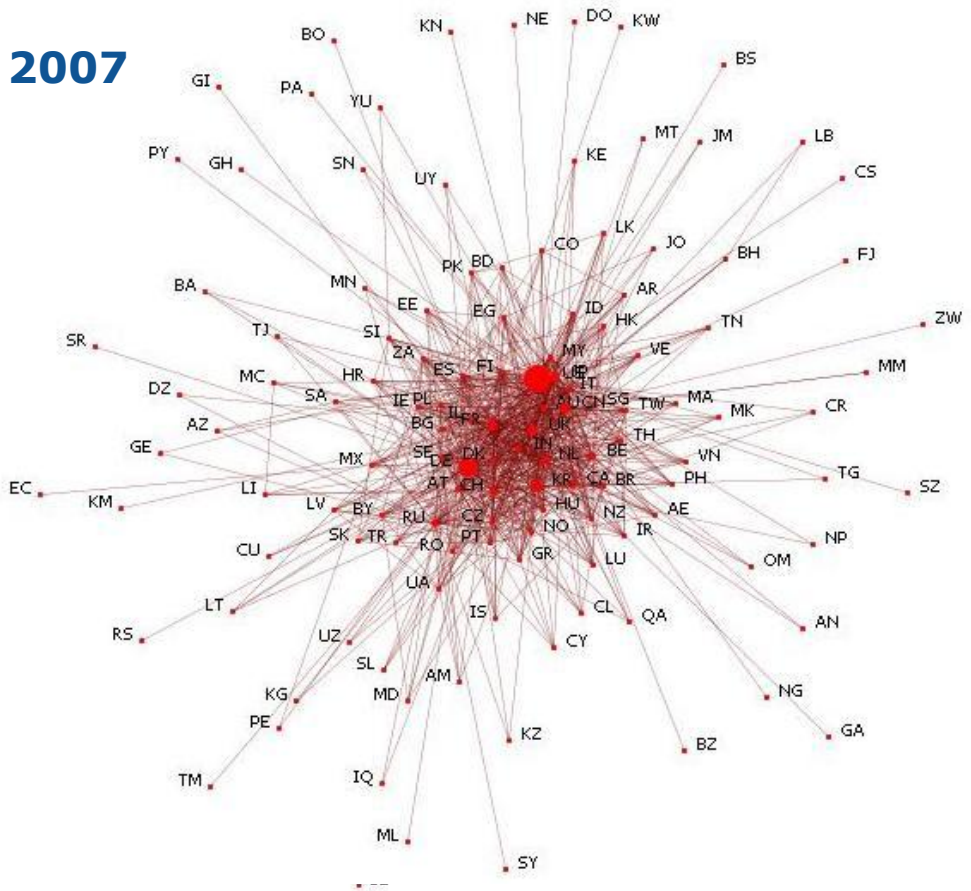
Dataset based on EPO PATSTAT

- 59 Patent Offices considered
- Priority patent applications, 1990-2007

Connecting the dots

- International co-inventions
- Linking countries sharing patents developed by their residents

Global innovation network



Source: De Prato and Nepelski, 2012

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Global innovation network

	Number of connections		Intensity of connections		Gatekeeper index	
			1990			
1	US	60	US	207	US	0,604
2	Germany	35	Germany	126	Germany	0,141
3	UK	25	Japan	62	Poland	0,092
4	Switzerland	22	France	55	UK	0,059
5	France	22	Switzerland	52	Austria	0,056
6	Canada	20	UK	46	India	0,051
7	Japan	19	Canada	39	France	0,040
8	Italy	18	Belgium	21	Switzerland	0,027
9	Netherlands	15	Italy	21	Russia	0,027
10	Austria	15	Netherlands	21	Mexico	0,026
			2007			
1	US	164	US	1313	US	0,262
2	Germany	152	Germany	819	Germany	0,156
3	France	124	S. Korea	419	Russia	0,102
4	UK	110	France	336	France	0,091
5	S. Korea	108	UK	318	S. Korea	0,054
6	Russia	108	Japan	305	Spain	0,049
7	Netherlands	106	China	295	China	0,047
8	Japan	98	Switzerland	262	UK	0,039
9	Australia	90	Canada	197	Italy	0,034
10	China	90	Netherlands	195	Netherlands	0,031

Source: De Prato and Nepelski, 2012

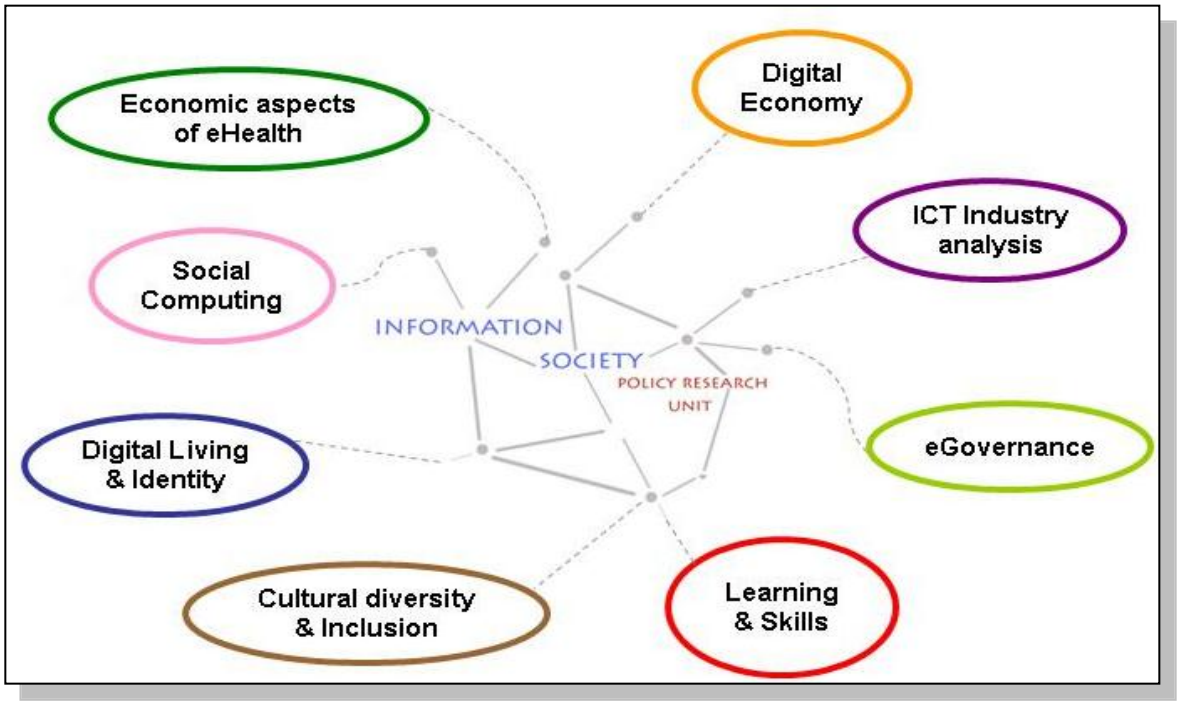
Global innovation network

- From *one-to-one* to *many-to-many*
- From *self-reliance* to *mutual dependence*
- Bridging and absorbing as important as creating and producing
- New entrants

Conclusions

- **Changing geography of innovation**
- **New organization of innovation**
- **Seeking, exploiting and transferring knowledge across the borders**
- **Positioning strategy**

Thank you!



Further information available at:

http://is.jrc.es

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