

## Appendix C Typology of policy instruments

Innovation system element and policy objective	Policy instrument	Description
<i>Policies enhancing skills for innovation</i>	Support to human resources for R&D	Measures that support the development of human resources for research such as doctoral grants to support research in a specific field or encourage the involvement of a specific group in research, support to further professionalization of research staff, post-doc programmes, supporting researchers to participate in international networks, etc.
	Innovation related skills education	Support to developing innovation and entrepreneurship skills of researchers, business managers, students, support to vocational training with an innovation/research dimension, support to innovation management trainings of staff in enterprises/universities.
<i>Policies to support investment in research and technologies</i>	Competitive funding of research (e.g. universities and public research organisations)	Competitive grants provided to academic research institutions, universities, and public and private non-profit research institutions. The focus is on conducting basic research projects or research projects addressing a societal challenge and less on involving companies or industry.
	Direct business R&D support	Competitive grants provided to enterprises to engage them in pre-competitive, industrial research.
	R&D infrastructure	Support to the development of national research infrastructures (both general or tied to a specific programme) and to ESFRI - European Strategy for Research Infrastructure plans
	Centres of Excellence	A centre of excellence is a structure where research and technology development (RTD) is performed of world standard, in terms of measurable scientific production (including training) and/or technological innovation. (Erawatch, 2007)
<i>Policies to enhance innovation competencies of firms</i>	Direct business innovation support	A direct support to enterprises encouraging them to conduct innovation projects supporting product development, commercialisation, marketing, services innovation, innovation management, industrial design, support to investment readiness; to acquire modern machinery, equipment, know-how, promotion of internationalisation. The support is given to the company directly.
	Support to start-ups	Support provided to the creation and early development phase of innovative enterprises, including spin-offs from large firms and venture cup type competitions.
	Innovation networks and platforms	Support that is fostering networking of enterprises, the development of business associations, and support to setting up innovation platforms of businesses, universities, and research institutions.
	Innovation support services	Support to innovation intermediaries or for the creation of innovation advisory structures, organisations who then provide support to enterprises such as advisory services, hands-on trainings and networking events, internationalisation etc.
	<i>Innovation</i>	<i>This instrument refers to putting in place specific innovation</i>

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	<i>vouchers</i>	<i>voucher schemes.</i>
	(Technology) Incubators	This instrument refers to setting up and developing technology or innovation incubators as a specific instrument to channel innovation support to enterprises.
<i>Policies to strengthen linkages within innovation systems</i>	Collaborative R&D programmes	Measures to support R&D projects conducted in some kind of a co-operation between public/academic/not-for-profit sector research institutions and enterprises (including specific schemes to encourage the business sector to fund research in research institutions).
	<i>Cluster programmes</i>	<i>All policy initiatives aimed at specifically promoting cluster development and support to cluster management at national or regional levels. This includes all state aid measures classified as aid for innovation clusters in the Community Guidelines for State Aids for R&amp;D and Innovation</i>
	Mobility between academia and business	Support provided to encourage the recruitment of researchers by enterprises; 'industrial resident schemes' where industry staff enrolls in academia, including recruitment of skilled personnel in enterprises.
	Technology transfer	Support given to establish structures and mechanisms to encourage the transfer of know-how and technology from research to business: funding of technology transfer offices and other knowledge transfer structures between academia and industry, SME-academia networks and other research commercialisation support structures, matching SMEs with an appropriate "technology provider" in order to address similar technological problems, relay projects between academia and business.
	Competence centres	Competence Centres are investments by Member States made to encourage greater efficiency in the interaction between researchers, industry, and the public sector, in research topics that promote economic growth by their direct relevance to industry agendas. They can be considered as public-private partnerships, aimed at enabling research which might not otherwise take place, and facilitate better interaction with industry towards producing tangible economic benefits (CREST, 2008).
	Spin off support programmes	This type of instrument has the objective to commercialise research results, bring innovation to the market through supporting spin-offs from universities for instance through providing professional support for scientists in turning a good idea into a viable business. They enforce the commercialisation of research results via patenting, licencing or through business training for scientists, creation of awareness.
	Science and technology parks	Science and technology parks aim to establish concentrations of firms in a particular area. It is a property-based initiative which has a high quality physical environment, is located within a reasonable distance of a university or research institute and emphasise activities which encourage the formation and growth of a range of research new technology or knowledge-based enterprises. (Phillimore and Joseph, 2003)

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<i>Demand and framework conditions for innovation</i>	Awareness raising	Funding of activities aimed at promoting an awareness of the benefits of innovation to the economy and society and to encouraging a more innovative culture. Activities supported could include: studies, surveys and dissemination of the results, workshops, conferences, exhibitions, networks, publications, broadcasting, competitions for creativity, innovation or venture cups
	E-society	Support measures that address the development of broadband infrastructures, the ICT skill development of citizens, awareness raising to ICT, putting in place e-governance solutions such as electronic health cards etc.
	IPR measures	Support provided (incl. provision of information through road shows, open days, exhibitions, IP to promote business success, patent information centres, training, direct support to IPR) for patenting, trademarks, copyright, design rights and their commercial exploitation
	<i>Financial instrument (loans and guarantees)</i>	Form of funding... Subsidised loans, guarantees, support to private equity etc.
	<i>Support to venture capital</i>	Form of funding... Public funding provided to private (or public-private) financial service providers with a view to leveraging an increased private investment into innovation activities of existing enterprises, including guarantee mechanisms (development stage capital)
	<i>Public procurement</i>	Form of funding... Contracting authorities acting as a launch customer for innovative goods or services which are not yet available on a large-scale commercial basis, and may include conformance testing
	<i>Tax incentives</i>	Form of funding... Tax credits with the objective to encourage R&D investments, innovation or increase demand for innovations.