

On Competence Centres

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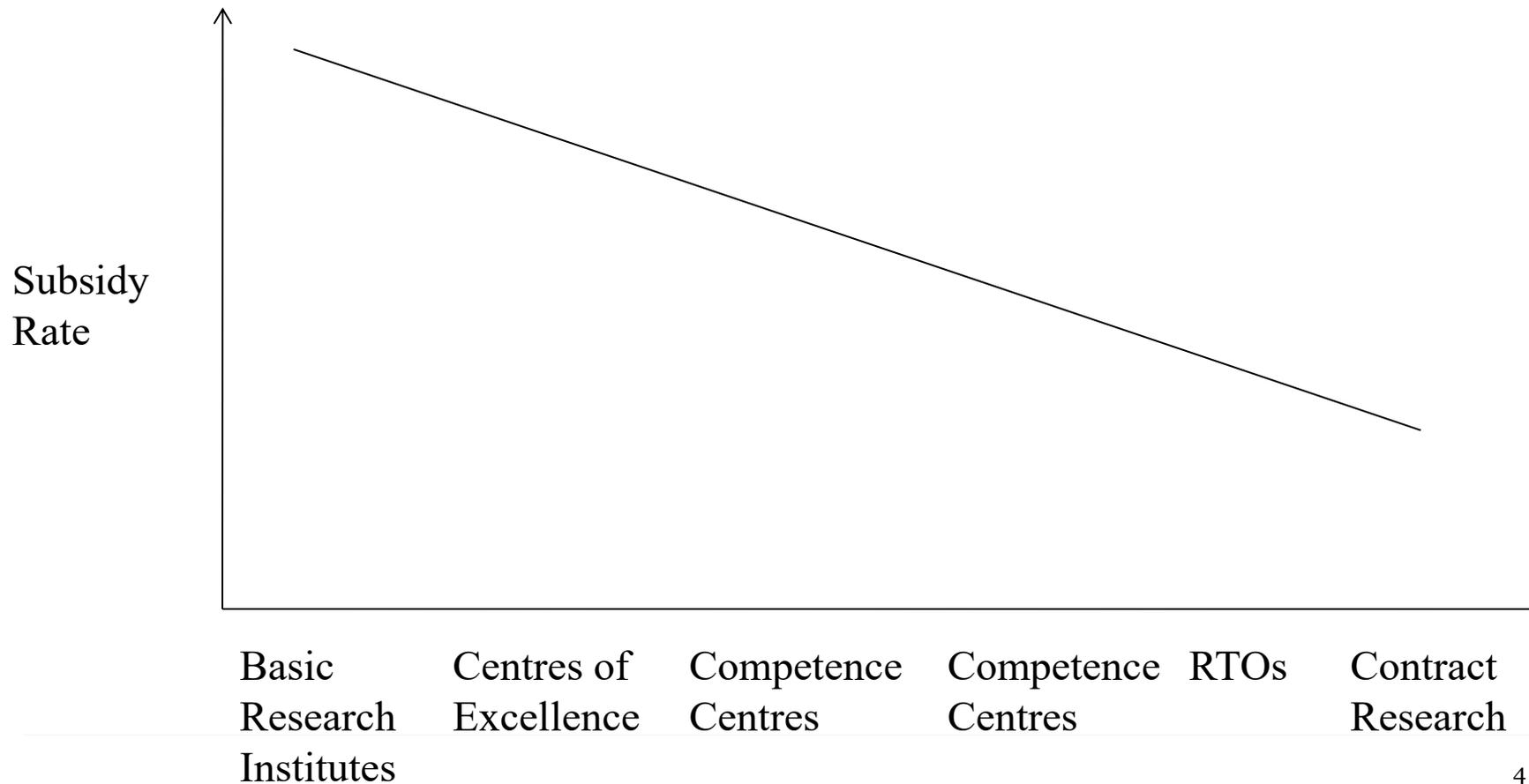
Road map

- What are competence centres?
- Where do they come from?
- What do they try to do?
- Governance and evaluation
- Impact
- RTOs are not competence centres
- The debate between the 'Swedish' and 'Austrian' models
- Some lessons from the international literature on competence centres

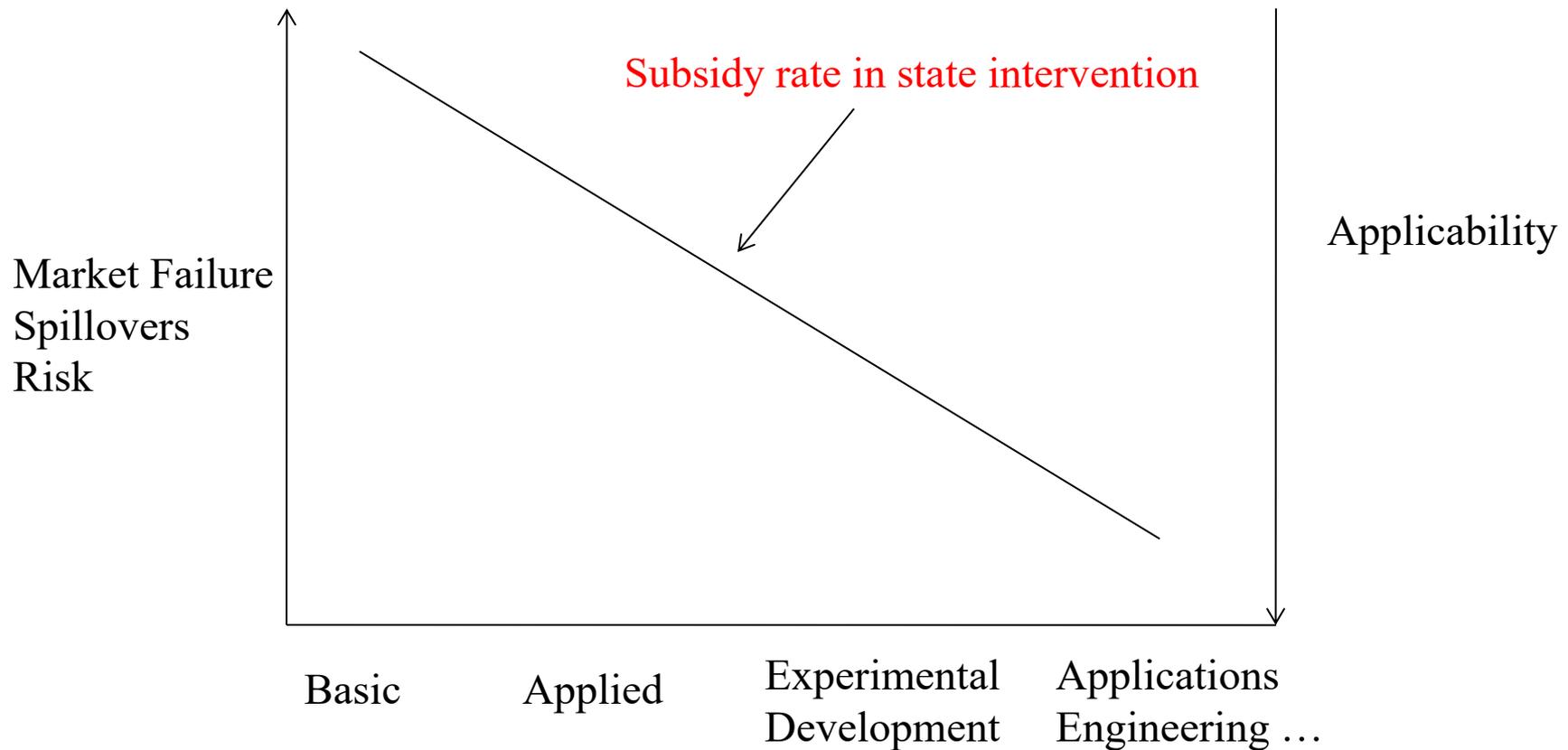
What are competence centres?

- Long-term, time-delimited academic-industry research consortia
 - *Increasingly, public sector organisations also participate*
- Typically on a university campus
 - *Though RTOs may also be involved in countries with well-developed RTO systems*
- Structural objectives: ‘Changing Research Culture’
 - *In the university*
 - *In industry*
- Address PhD education; often involve lower levels, too
- Typically high rates of subsidy, to enable more fundamental research than in normal academic-industry collaboration

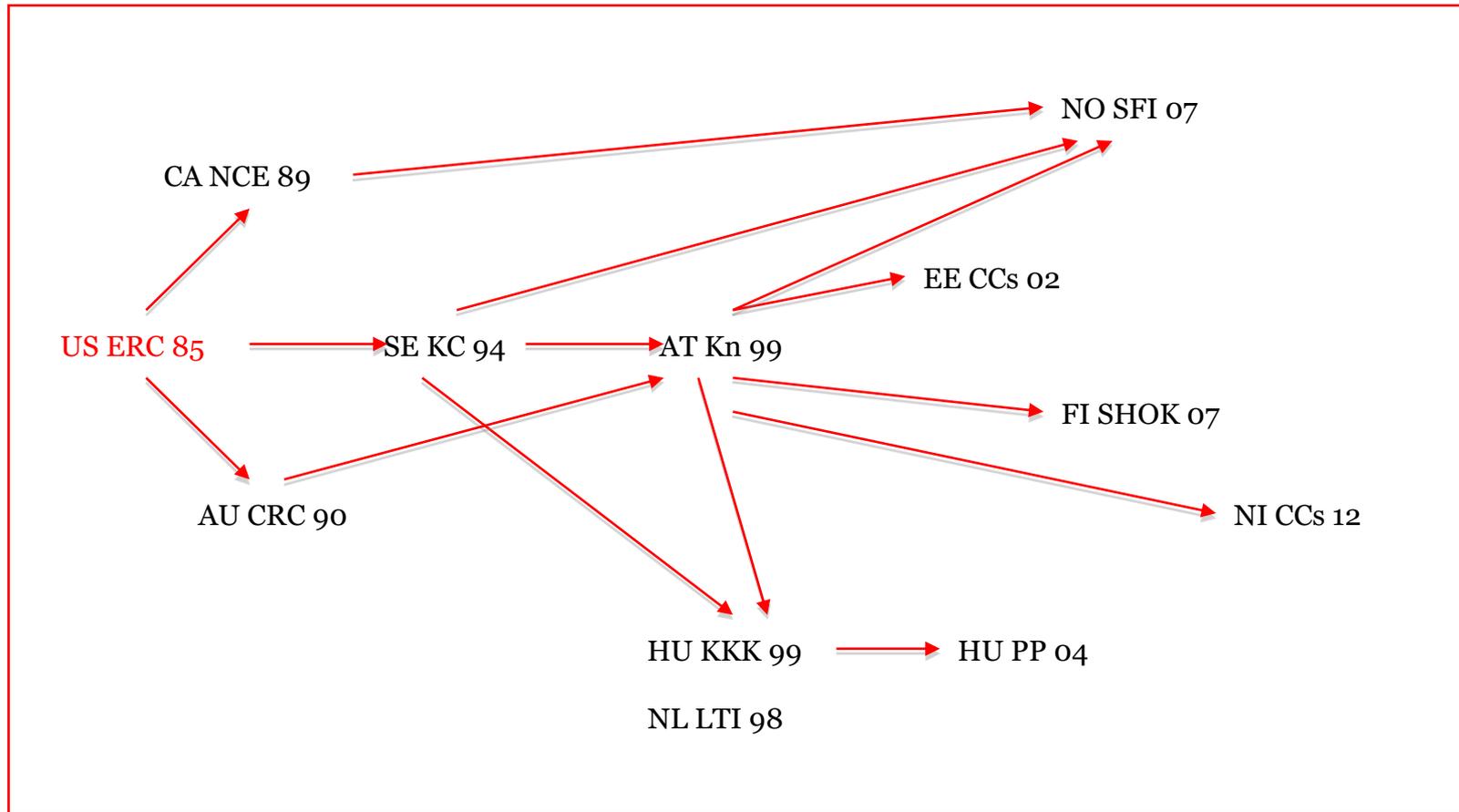
We have different institutional funding models for different types of research organisation



The rate of subsidy is consistent with degree of spillover



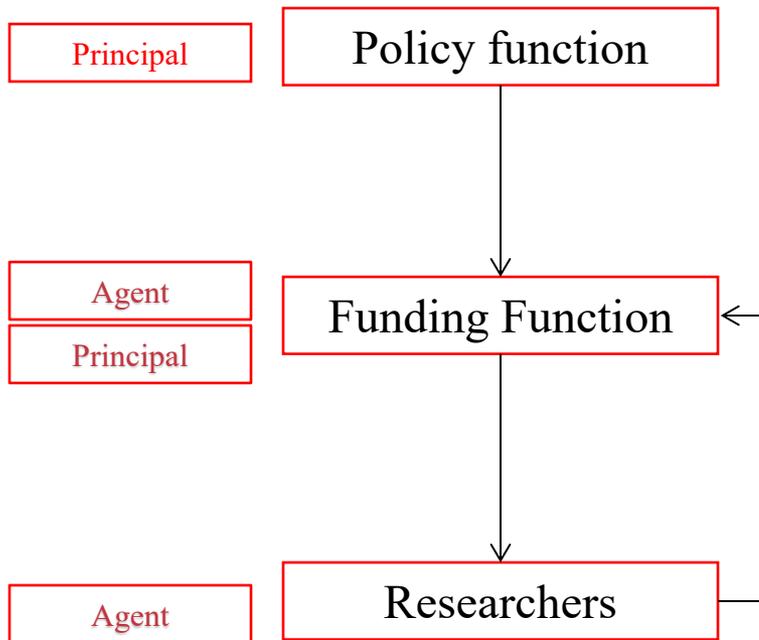
Where do they come from?



What are they trying to do?

- Performing industrially relevant research of a more fundamental kind than is normal in academic-industrial cooperation
- Producing high-quality scientific outputs
- Developing scientifically qualified human capital with skills in industrially relevant areas
 - *Focusing research opportunities in these areas*
 - *Producing ‘industry-ready’ PhDs and other degrees*
- Developing interdisciplinary critical mass within academia
- Changing research culture by
 - *Encouraging companies to engage in ‘open’ innovation*
 - *Encouraging greater interest in and acceptance of the value of industrial collaboration within academia*
- Producing innovations in the participating companies and through spin-outs

Devolution poses difficult governance challenges



- Double principal-agent relationship
- Mixed views about who ‘owns’ the intermediary level
- The role of beneficiaries in governance increases the risks of adverse selection and lock-in
- Checks and balances needed to constrain the power of the beneficiaries in deciding funding

Braun, Dietmar (1993) Who governs intermediary organisations? Principal-agent relations in research policy-making, *Journal of Public Policy*, 13(2) 135-162

[van der Meulen, Barend \(1998\) Science policies as principal-agent games: institutionalization and path dependency in the relation between government and science. *Research Policy*, 27 \(4\). pp. 397-414](#)

Competence centres' long lives and restructuring tasks should be reflected in evaluation: formative to summative

1. Early: is this Competence centre working?
 1. *Does it conform to the programme model?*
 2. *Does it have the right governance and processes in place?*
 3. *Is it equipped to produce and maintain quality*
 4. *Does it appear to be sustainable?*
2. Growing: is it beginning to produce good work, relevant to the stakeholders and with potential for wider impact? Is it setting new agendas, as intended? Governance?
3. Maturing: is it beginning to have visible impact beyond the stakeholder group while maintaining quality? Governance?
4. Late in life: what has it achieved (outputs, outcomes, impact)? At a good quality level? Succession/continuation? Governance?

Competence centre evaluation issues need eventually to be considered in a long-term context

Impacts

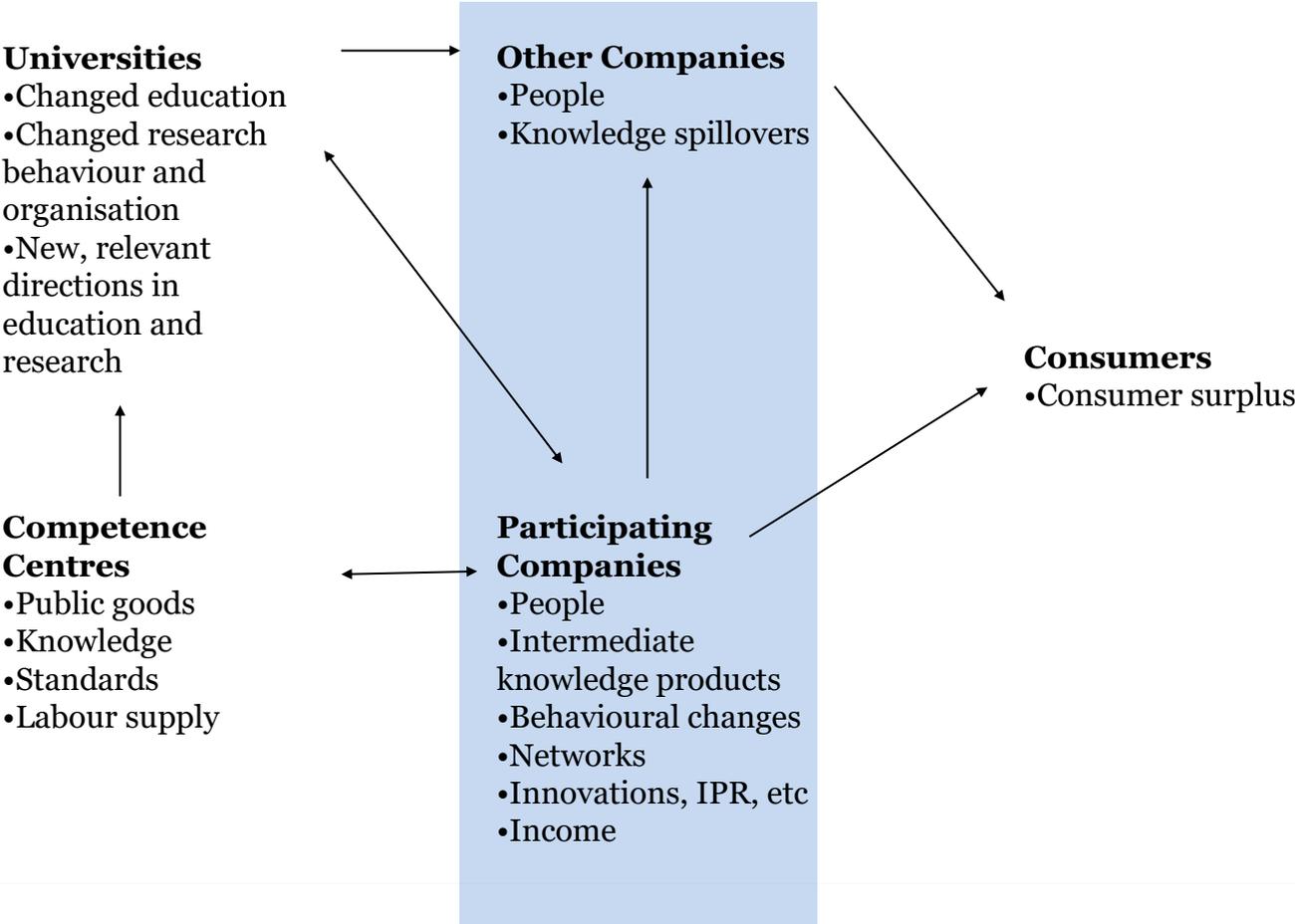
- Short- and long-term innovation impact
- Economic impact
- Impact on institutions, capacity
- Effects on education
- Knowledge Value Collectives
- Agenda setting, focusing devices

Other issues

- Governance
- Learning curve
- Inherent conservatism of the instrument
- Programming
 - *Top-down, bottom-up*
 - *Role in instrument portfolio*

Figure 14

Impact logic of the Swedish competence centres

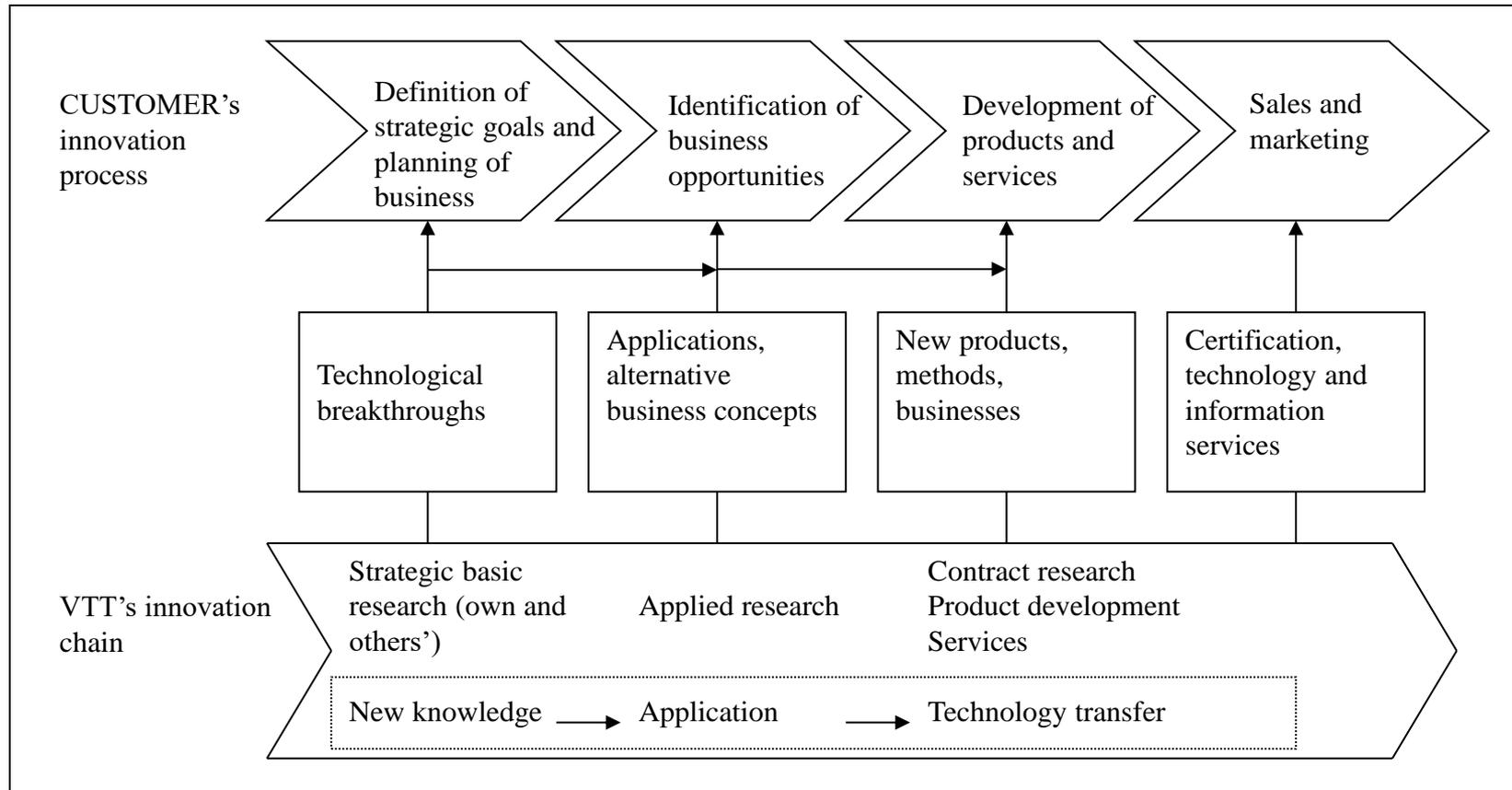


Source: Peter Stern, Erik Arnold, Malin Carlberg, Tobias Fridholm, Cristina Rosemberg and Miriam Terrell (2013), Long-term Effects of the Swedish Competence Centres, Stockholm, Vinnova

Sweden: Groups of competence centre impact on companies

- Direct impacts on industry, through generating directly usable outputs
- Direct impacts through behavioural additionality, including creation of knowledge networks
- Economic impacts on participants
- Economic development of individual SMEs participating in CCs
- Indirect effects through adding to the firms' stock of internal resources
- Spillovers
- Indirect effects, via the university system

RTOs are not competence centres but may play a role



‘Austrian’ versus ‘Swedish’ model

- Barriers to entry and exit posed by the company model
- Regulatory and fiscal complications of company form
 - *Reporting and legal obligations of directors*
 - *VAT*
 - *State aid rules ...*
- How to handle IPR after death
- How to release the employees after the centre’s life ends?
- Valuing shares?
- Privatisation of public goods?

Some lessons from the international CC literature

- Big economic impacts, over extended periods of time
- Changing research culture in universities and companies
- Key effects result from integrating and changing education
- Producing more industrially usable PhD-holders
- Importance of “sweat equity” (ERCs)
- Governance, balance of power are key to success in centres
- Integrated programmes and centres work best
- Sort out a fair IPR arrangement then get on with your life – the sooner the lawyers are kicked out, the better the centres work
- Behavioural additionality does not conquer the market failure associated with fundamental research – when the high subsidy runs out, the party’s over

