Shared Use of Research Laboratories
Changing Spatial Concepts

A Case Study in a Finnish Biomedical Organization

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Objective of the research

• to understand the *shared use* concept more precise way

• to identify how shared use laboratory practises and spaces are implemented in biomedical laboratories

• how the ”shared use thinking” changes spatial concepts in the future
Research questions

1. What kind shared use practises can be identified in biomedical research laboratory environments?

2. How shared use practises are changing spatial concepts in research laboratory campuses?
Method

• The research is a qualitative case study research
• Empirical data was collected in 2014
• 10 interviews with different stakeholders
  – Leaders of the unit
  – Professors
  – Post-doc researchers
  – Technical staff
  – Laboratory architect
• observation, literature review
• inductive content analysis was used as a method to analyse the research material
Shared versus Your Own

• shared use of spaces/tools/services, idea of sharing resources…
• many examples and lot of research in other fields
• shared use of roads/railways/infrastructure (research and practises developed over 100 years)
• opposite: private road, room, laboratory, home, car…
• question of ownership/control/power -> subject is often strongly related to emotions/conflicts…
• towards sustainable consumption?
Results
Different scales

• In the field of biomedical research, **shared resources** are coordinated in different scales: *in global level, nationally, locally and building based*

• The aim of the national coordination is to provide a researcher a network of state-of-the-art laboratory resources

• All areal biocenters are not required to purchase rarely used, expensive instruments

• The objective is to profile Finnish biocenters focusing on explicit research areas supported by specialized core facilities
Core facilities

• A core facility is a centralized, shared resource that provides scientific investigators access to instruments, technology platforms, services and expert consultation
• Examples: clean rooms, zebra fish and fly centers
• Core facilities has been seen as an effective recruitment asset (top researchers want to have best equipment)
• Resource allocation for core facilities is a strategic choice and part of national business politics
Different levels of core facilities

- Full core facility service
- Instrument + technician
- Shared instrument
Centralized versus decentralized

- Short connections between laboratories and offices support effective research work and learning

Two alternatives how to organize centralized facilities
Own versus shared

• The key element of the successful shared laboratory solution is the right combination of dedicated laboratory spaces and core facilities.

Own laboratory bench can be located either individual room or common room with other researchers.
Spatial concepts changes

From solo work to team work
-> multi-space/activity-based offices -> flex work/distributed workplaces

From single units to collaborative work settings
-> networking, partnering
-> opening spaces/resources
-> shared spaces/services
Advantages of shared resources

- Core facilities as an recruitment asset
- State-of-the-art instruments available
- Cost-effective use of instruments
- Skillful technical staff
- Knowledge sharing & collaboration
Practical Implications

• better knowledge concerning successful implementation of shared use laboratories may give new ideas and motivation for managerial decision making (at the moment it’s easy to say no…)

• in general spatial concepts are changing to support shared use of spaces and organizational collaboration
  -> ”real world case studies” are needed to support design processes/multidisciplinary dialogue in projects
Conclusions/Discussion

• It seems that shared use of laboratories is a relevant concept also in the biomedical/health care research industry.

• Shared use of laboratories model is much more than a cost cut tool -> holistic thinking/leadership is needed.

• Collaborative ways of sharing spaces, tools and services enables learning, knowledge sharing and innovations (big thing!)

• State-of-art – research environment is a crucial success factor / offers competitive edge in many levels -> more quality than quantity (less and better) -> more studies needed -> business cases…