6th FRUCT seminar

Jose Teixeira @ TSE

Helsinki, Nov 2009

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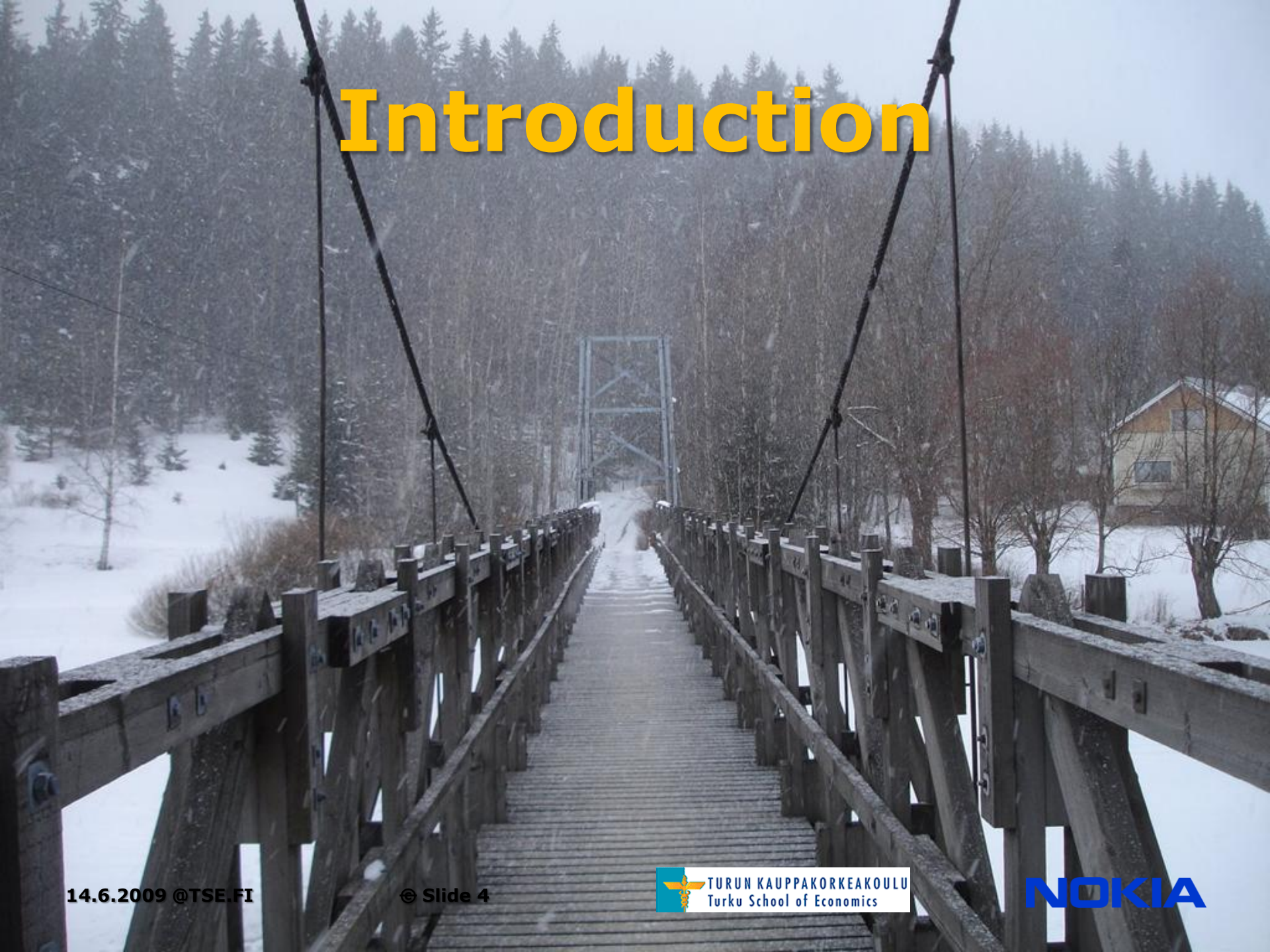
Benefits of an open-source platform from an economical perspective.
The Maemo Case Study

Outline

- Introduction
- Methodology
- Results
- Discussion
- Conclusions
- Future research

Introduction



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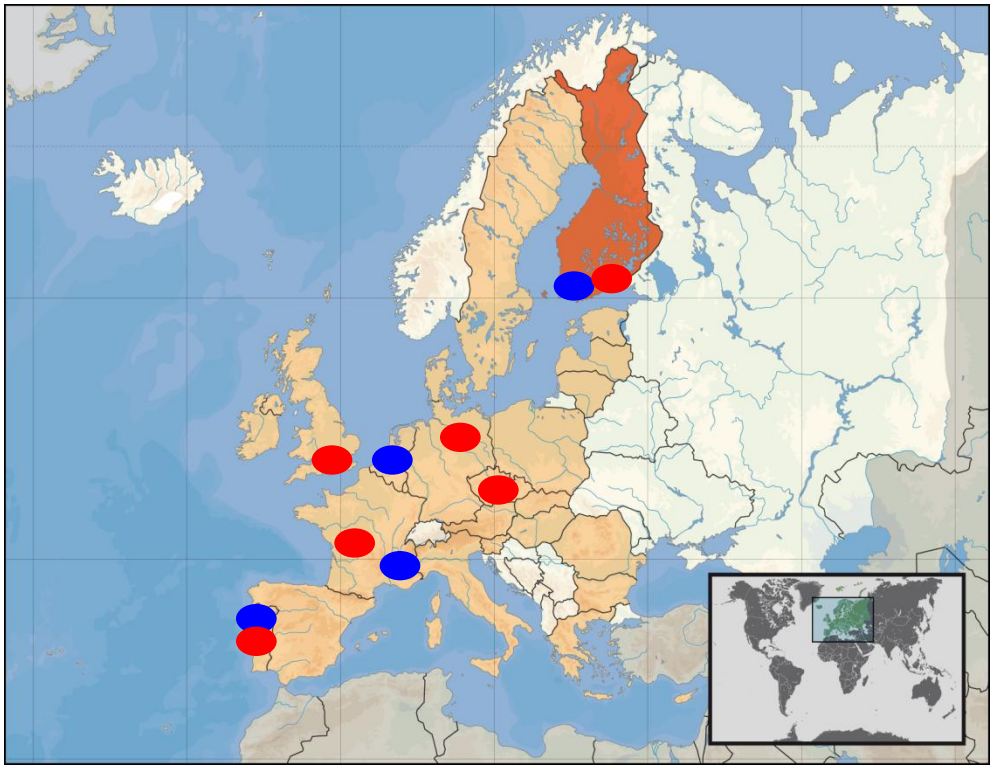
Introduction

I (Who am I)



International

DHL

Open-source

Retail

Triathlon

Immit

Tesco

Sonae

Computer science

IT

Finland

Nokia

Airbus

Research

Debian

TSE

Software

EU

Orienteering

Introduction

II (Research scope)

Education and Culture
Erasmus Mundus

International Master in Management of Information Technology

Participating universities:

Tilburg University, The Netherlands

Turku School of Economics, Finland

IAE Aix Graduate School of Management, Université Paul Cezanne Aix-Marseille III

http://www.immit.eu/

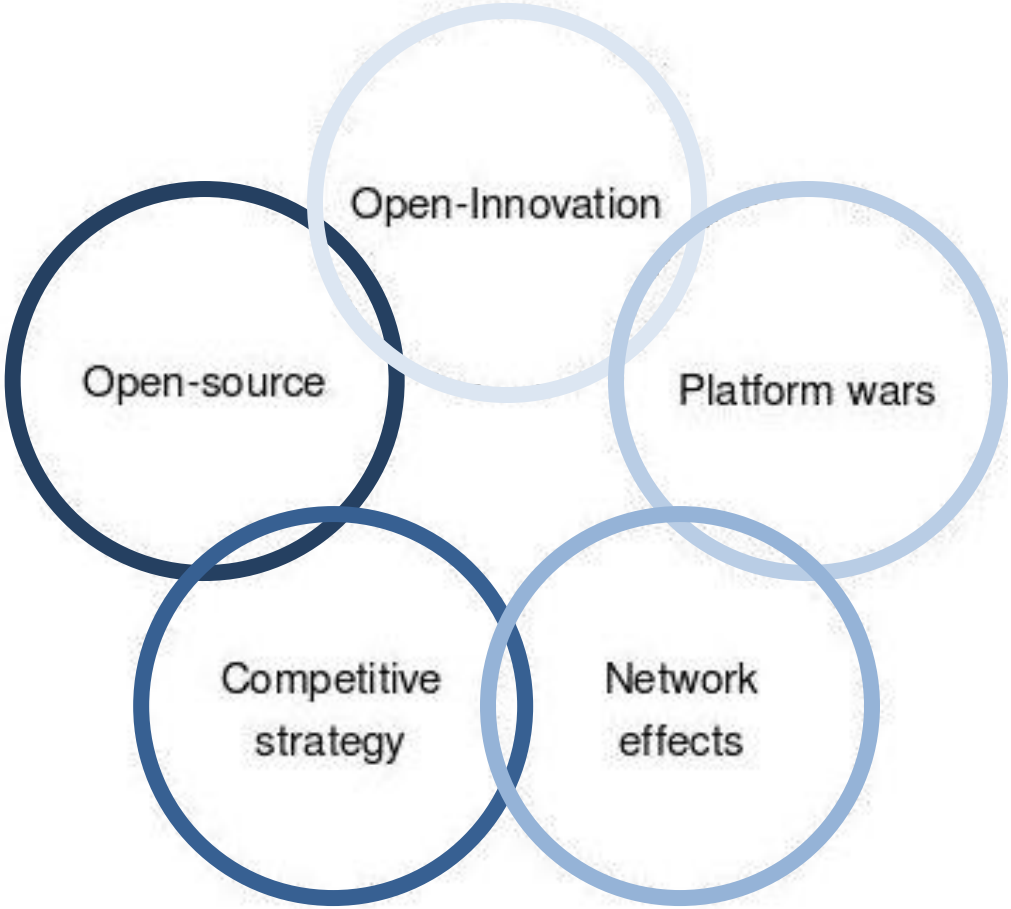
Introduction

III (Research question)

- **"How an open-platform brings competitive advantage in a high-tech and high-competitive market under network effects ?"**

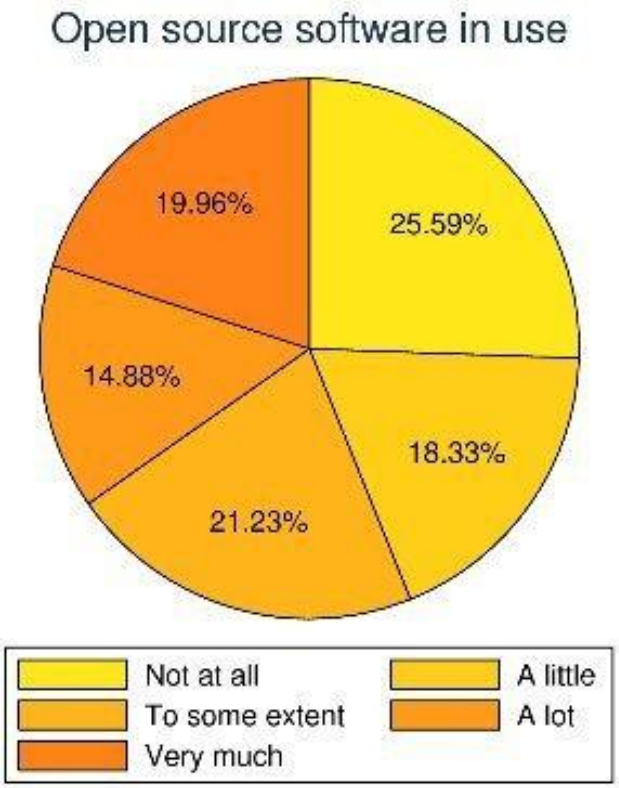
Introduction

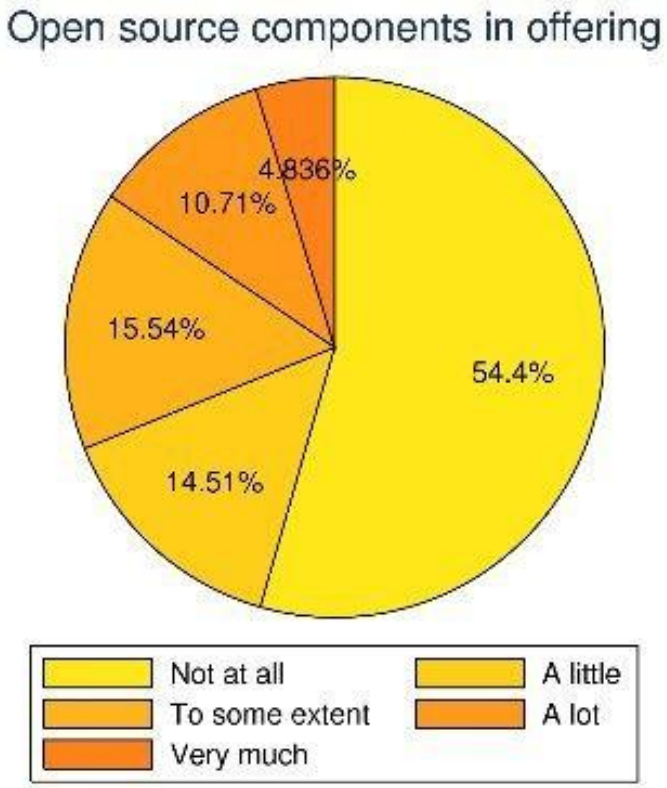
IV (Literature review)



Introduction

V (Open-source use and offer in Finland)

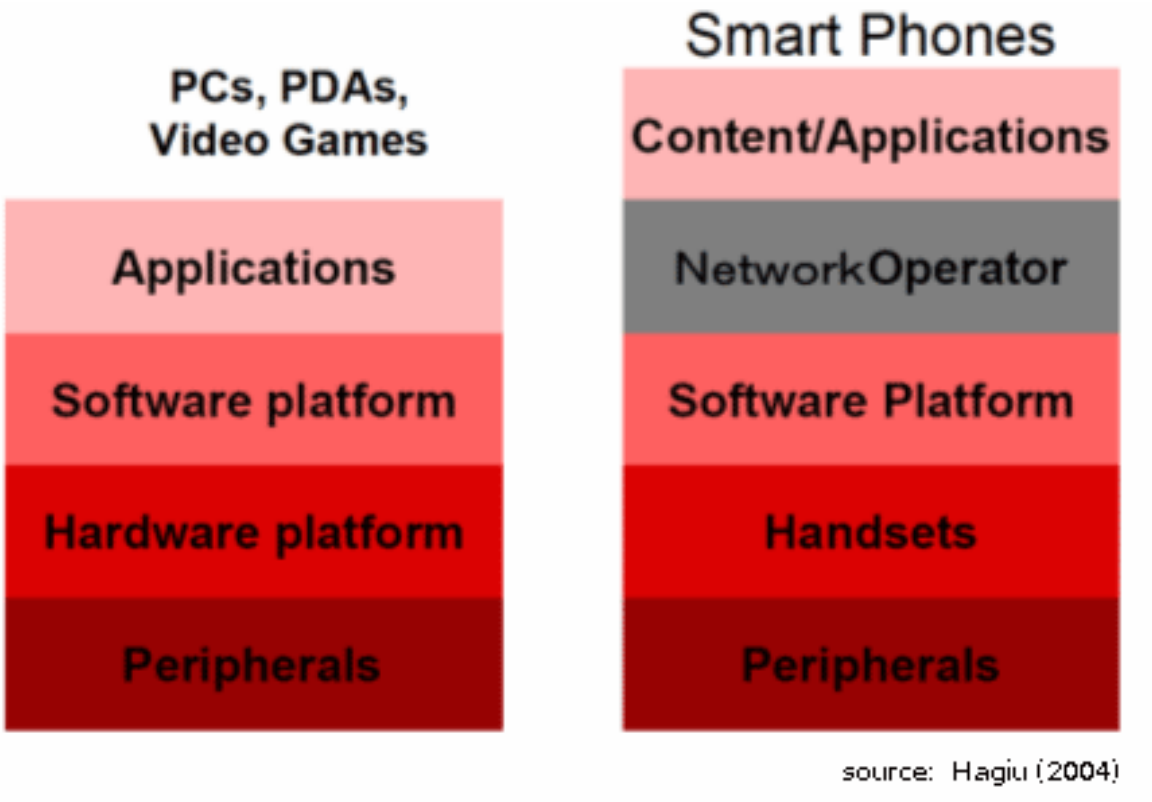




source: Helander et al. (2008)

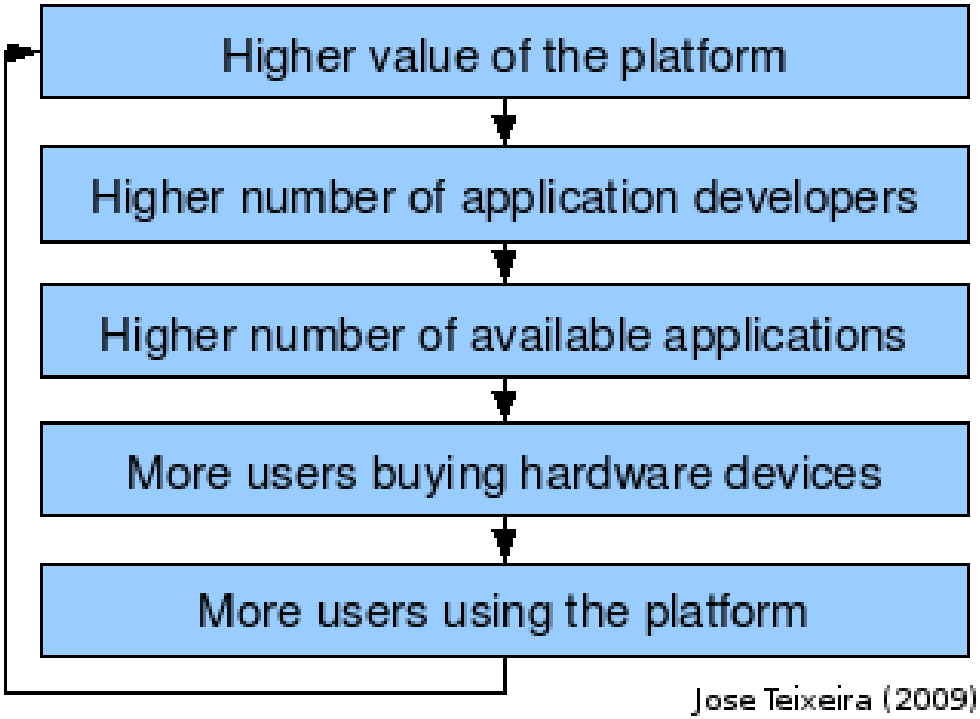
Introduction

VI (Multi-sided platforms)



Introduction

VII (Network effects)



Jose Teixeira (2009)

Methodology

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Methodology

I (research question)

- "How an open-platform brings competitive advantage in a high-tech and high-competitive market under network effects ?"
  - Suitable for case study methodology

source Yin, R. (1984)

Research methodology

II (Case study evidence collection)

- **Public available documentation**
- **Semi-structured interviews**
- **Direct observation**

- **A case study pilot was conducted in a "expertize" firm in Turku.**

source Yin, R. (1984)

Results

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Results

I (platform development open-source benefits)

	Requirements and Design	Construction	Testing	Maintenance
From using open-source assets		- Ready made and high quality software assets can be used. - Open-source software development tools are widely available, reliable, smooth and easy to use with a good learning curve. - Easy integration of open-source software development tools and repositories within the software development environment. - No licensing nightmares to setup a software development environment. - Open-source software development tools integrate better with agile methodologies.	- Open-source testing tools are much more accessible. - Open-source testing tools are easier to evaluate, customize and integrate with the software testing environment. - Open-source testing tools documentation is good. Many people document them in a very dynamic process. - No licensing nightmares to setup a software testing environment. - Open-source software testing tools integrate better with agile methodologies.	

Results

II (platform development open-source benefits)

	Requirements and Design	Construction	Testing	Maintenance
From working together with the community	- Plenty of ideas. - Plenty of experimentation. - Find the needs together. - Define next steeps together.	- Easy and smooth for new developers joining an open-source project, to start working immediately. - Everything looks more visible and available. - No contracts and legal departments. - Symbiotic relationships with different open-source project communities. - Ampler communication and collaboration with communities lead to fast quality increases.	- Contributions to communities will be tested. - Communities also find report and fix bugs.	- Many platform bugs are reported by the community. - Communities provide more "eyes" to see bugs and possible improvements. - Large maintenance activity outside corporate boundaries. - Some advantages associated with the hardware and software "cult" such as back-porting, creation of add-ons, etc

Results

III (Maemo as an instance of the open-source and open-innovation)

How open-source helps bringing new ideas and technologies inside Nokia?	How open-source helps Nokia deploying new ideas and technologies worldwide?
- Plenty of readymade open-source technologies can be used (ex: kernel). - Plenty of new ideas, new needs, and new requirements relates to the community events such as Maemo Summit, GUADEC, FOSDEM, BOSSA conference, Akademy among others. - A lot of experimentation going on among open-source communities. Many ideas, concepts, demos, prototypes can be picked-up. - Open-source brings together people with different profiles, cultures, interests, etc. Lot of new things could come from that.	- Some free advertising comes with open-source since the "word passes". - Creating new market with new product concepts; the Internet tablet market was created as result of Maemo open-source initiative. - Commoditization of open-source technologies directly impact competitive environments.

Results

IV (Evidences of Maemo open-source competitiveness)

How open-source helps bringing new ideas and technologies inside Nokia?	How open-source helps Nokia deploying new ideas and technologies worldwide?
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Results

V (Evidences on how open-source is attracting complementors)

How open-source is attracting complementors ?
•Developers are provided with a free API. •Developers are more empowered; they participate also in analysis and requirements. •Developers communicate more; they feel more relevant and free. •There is an open-source “cool” effect among young developers. They claim that it is easy to learn. •Hardware and software “cult” associated advantages are easier to achieve with open-source.

Results

VI (Platform competition under network effects)

	Minimizing platform adoption switching costs	Winning a large user base
How to?	- Support most popular application and services. - Provide easy to use data import mechanisms for the most popular software applications. - Provide easy to use migration mechanism for the most popular internet services.	- Attractive hardware. - Attractive software platform for complementors. - Attractive software applications and services for final users. - Lock in initiatives are a double-edged sword, they should be explored.
Open-source role?	- Some popular open-source appli-cation can be more easily ported. - The needed import/migration mechanisms can be identified, developed and maintained by open-source communities.	- Open-source high availability and transparency forces higher attractiveness of the software. - There are many popular open-source applications. For most of the popular closed-source software applications, there is an open-source version. - For most of the popular closed inter-net services, there is also a more open and free internet service.

Discussion

Discussion

I (Benefits from an open-platform)

- Easier integration of software parts and tools.
- Easy of use and favourable learning curve.
- Less legal affairs related with licenses and contracts.
- Better integration with agile methodologies.
- More dynamism in the documentation process.
- Easier technological procurement processes.
- Plenty of ideas, concepts and experimentation.
- Good image associated with open-source.
- Several users evolve from passives users to active contributors.
- Easier to establish symbiotic partnerships with other open-source communities and individual contributions.
- Differentiation of the overall platform.

Discussion

II (Competitive impacts)

- **Higher attractiveness for complementors.**
- **Commoditization of platform components.**
- **Better collaboration between different platform stakeholders.**
- **Erosion of competitors providing platforms with embedded lock-in mechanisms.**

Discussion

III (Limitations)

- **Significance of the research can be augmented if more data could be collected for analysis.**
- **Different types of documentation and more different interviewee profiles.**
- **Open-platform drawbacks, limitations and constraints not referred in this research.**

Conclusions

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Conclusions

I

- Open-source and open-innovation have a huge impact on corporate R&D.
- Open-source and open-innovation benefits enable internal performance enhancements on the development and commercialization of multi-side platforms.
- Many new research opportunities can be further developed.

Future research

Future research

I

Investigate the strategies used by open-source platform providers.

- "**Why**, **When** and **How** corporations follow an open-source based platform strategy?"
- "What are the main **benefits** and **outcomes** pursued?"
- "What are the main **barriers** and **risks** faced?"


End ? Questions ?