



# Master thesis at NTNU

Jørgen Birkeland, Vebjørn Berg

# M.Sc. in Computer Science



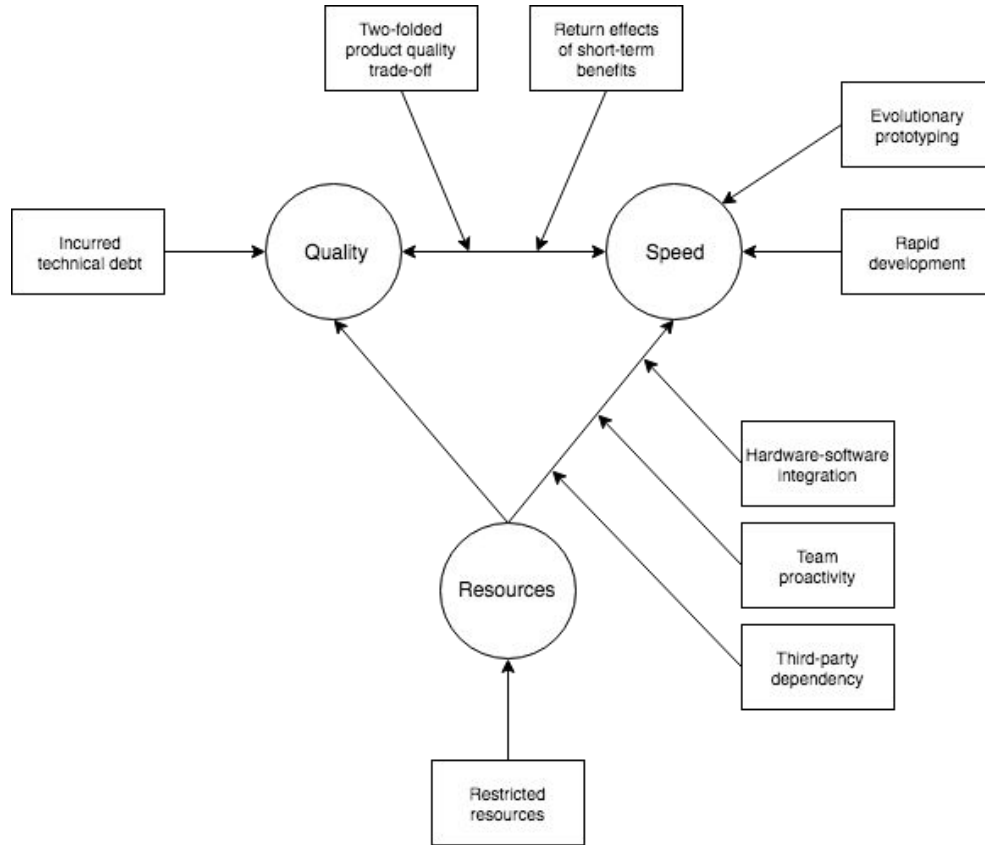
- 5 year Master's degree
  - Field of study (3rd year)
    - Software: How to develop and use computer systems in organisations
  - Specialization (4th year)
    - Software/Information systems

# Master thesis



- Literature review
  - “Software Startup Engineering: A systematic mapping study”
    - ELSEVIER Journal of Systems and Software
- Data analytics in hardware startups
  - “The Role of Data Analytics in Startup Companies: Exploring Challenges and Barriers”
    - I3E Conference (The 17th IFIP Conference on e-Business, e-Services and e-Society, Challenges and Opportunities in the Digital Era)
- Thesis
  - “Development Approach of Hardware Startups: The Trilateral Hardware Startup Model”
    - Research objective: Investigating the role of engineering activities, influencing development speed and agility. Explore commonalities, challenges and situational factors.
  - Interviewing 13 hardware startups

# The proposed model



# Implications and Future Work

- Improved understanding of the hardware startup context
- Privacy and security issues related to collection of personal data
- Hardware startups should give more attention to quality
  - How to ensure quality working with restricted resources
  - How to ensure product integrity during prototyping
- Generalize results to a larger startup population
  - e.g., markets, lifecycle stages, location

# Studying in Trondheim



## Keywords

- Friendship
- Study trip to Japan
- Physical activities - disc golf
- Student Organizations - Abakus, NTNUI
- Mountain trips



# Study Abroad



- Partnership with 500 universities from 100 countries
- University of New South Wales
  - Sydney, Australia
  - New friends from around the World
  - UNSW Football Team



