



Aalto-yliopisto
Perustieteiden
korkeakoulu

Financial model for process Innovation

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Työn saa tallentaa ja julkistaa Aalto-yliopiston avoimilla verkkosivuilla. Muilta osin kaikki oikeudet pidätetään.

Background

- Summer work financial modeling for Ioncell project
 - Ioncell environment friendly method for textile fiber production
 - technology developed in Aalto University and the University of Helsinki
 - Superior to current viscose technologies, more applications
 - Pilot plant in design to be built in Otaniemi
 - Financial modeling needed to support commercialization process
 - Understanding financing needs, credibility for startup
 - Acquiring financing for the project assist iCom team
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Objectives

- Study investment science theory behind financial modeling
- Create financial model
 - Ioncell technology production plant
 - Technology licensing startup company
- Model evaluation
 - Sensitivity analysis, key sensitivities in financial model
 - Scenario analysis, worst case scenario and more realistic
 - Identify key risks for the project

Scope

- Find literature sources
 - start with Investment science, David G Luenberg
 - Research articles Google scholar, university library database
 - Market data CCFEI, Fiber year 2018 report
 - Justify model
 - Factory model values (pulp, energy, ionic liquid)
 - Discussions with advisor board companies
 - Narrow down theory section for bachelors thesis
 - CAPM model, NPV vs IRR, payback time
 - Time value of money discounting
 - FCF based modeling, Inclusion of risk
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Tools

- Financial modeling with Invest for excel
 - Excel based software developed in Finland
 - Tools for financial modeling, sensitivity analysis
- Model data sources
 - CCFEI leading Asian textile and fiber market data provider
 - Free data sources
 - Discussions with advisor board companies
 - Compare to similar companies on market (Lenzing, Stora Enso)
 - Factory materials use from Aalto school of chemistry
 - <https://ioncell.fi/>

Time table

- Summer 2018
 - Studying theory
 - Financial modeling
- August 2018
 - Finishing financial model 2.0
 - Continue writing thesis
 - First seminar presentation
- End of year/early 2019 final presentation
- Report finished early 2019
- Work continued with Ioncell project until June 2019

Current progress

- Studied theory May – July 2018
- Financial modeling
 - First version finished in June
 - Feedback improved 2nd version July 2018
- Writing started in progress

References

- Ioncell official website <https://ioncell.fi/>
- Invest for excel software <https://www.datapartner.fi/fi>
- China chemical & Fiber economic information network
<http://ccfei.net/>