

Planning and Execution of a Biorefinery Project, 5 cr

PROJECT ASSIGNMENT
AUTUMN 2021

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Learning objectives

How to
prepare a
Project
Proposal

Deliverables
in Biorefinery
Investment
Project

Cost
estimating,
time
scheduling

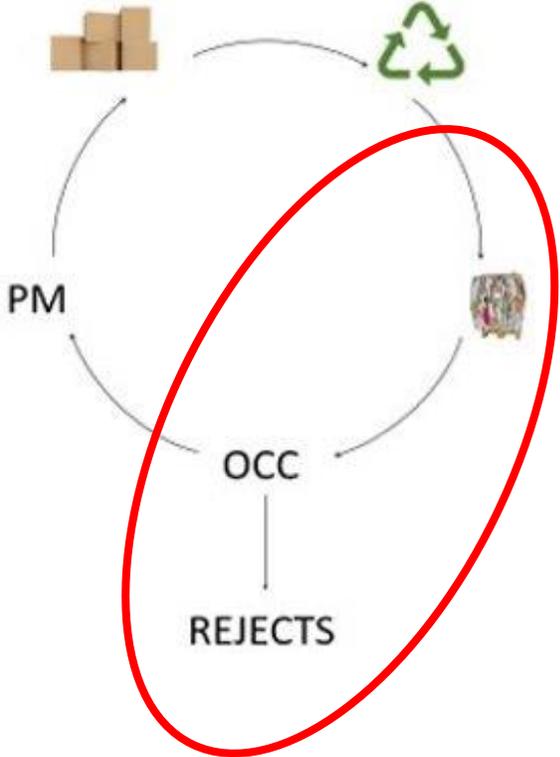
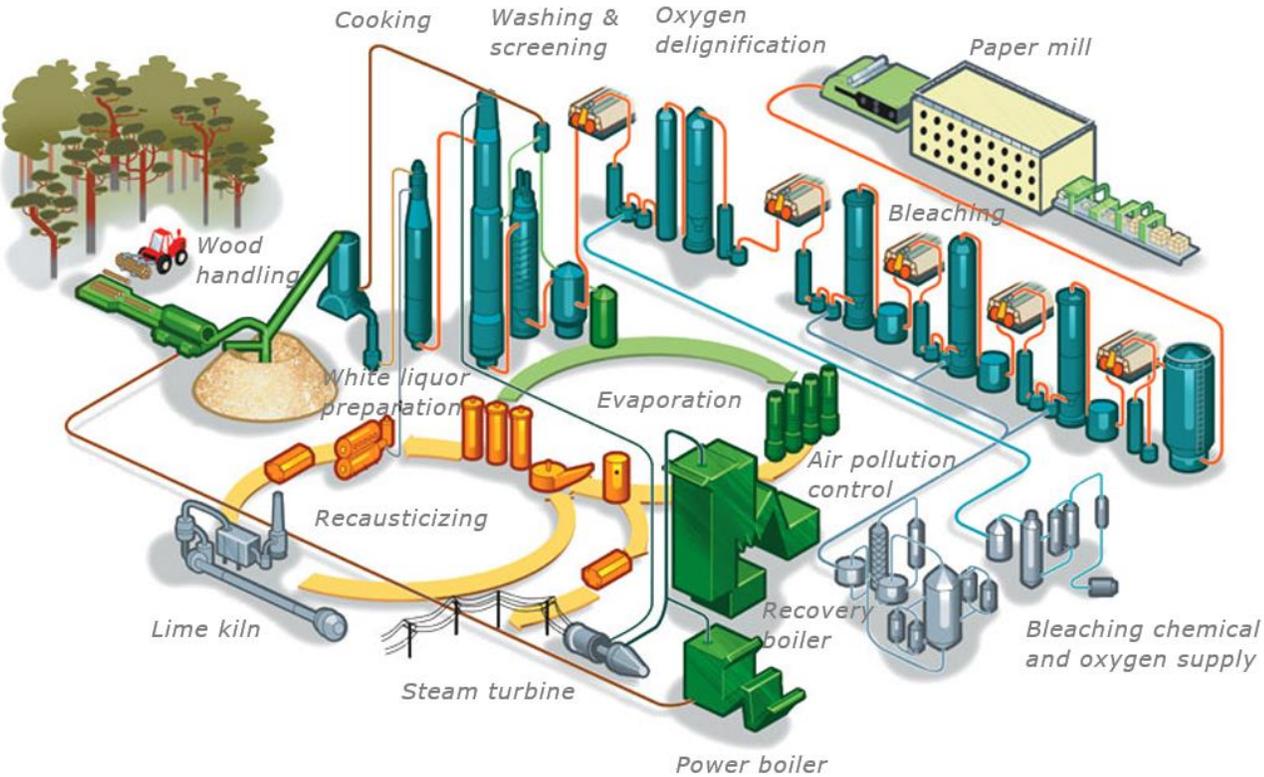
Project Team
Work

Background

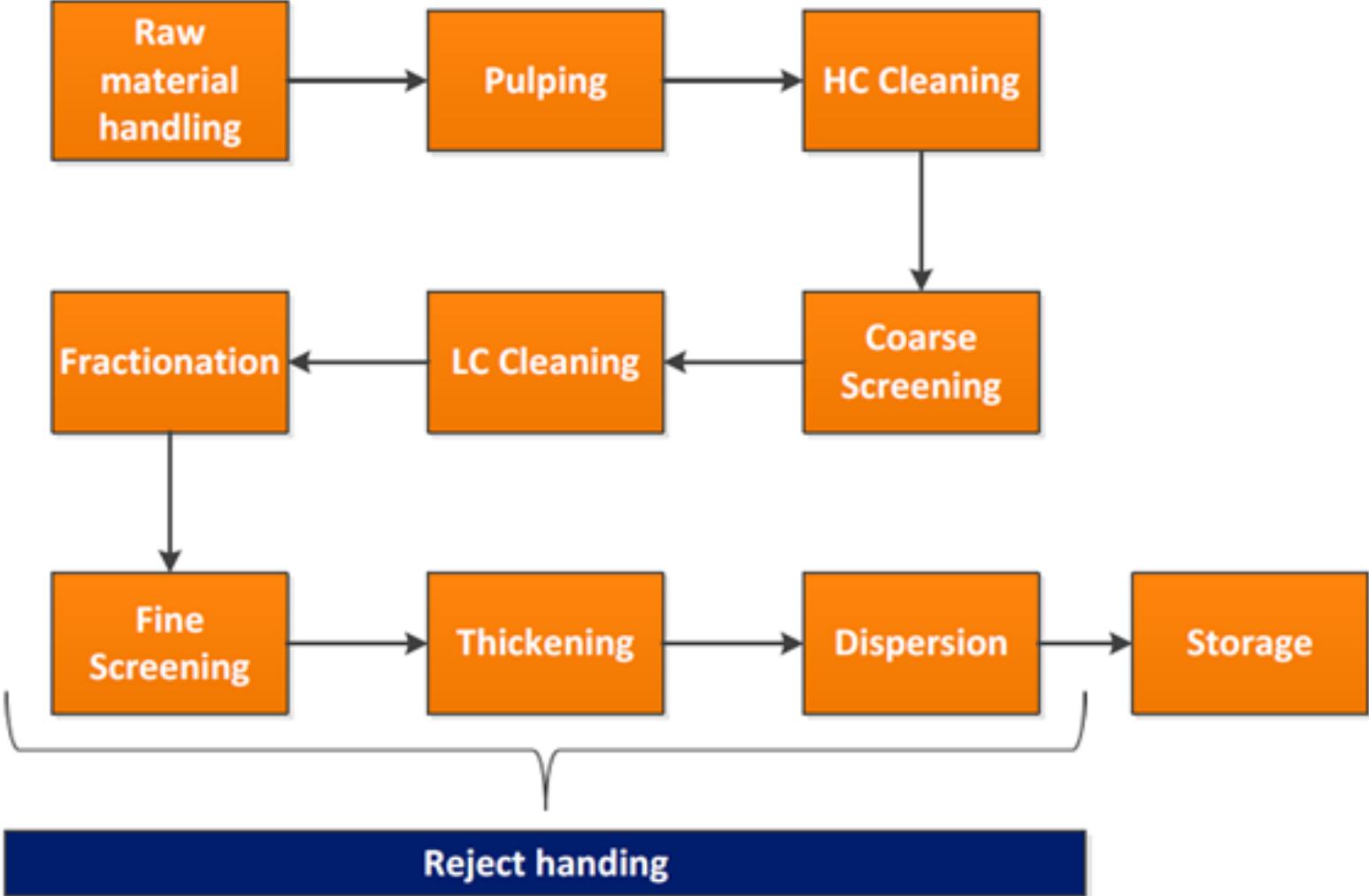
- Old corrugated cardboard (OCC) recycling plant will be integrated to an existing OCC production line
- OCC recycling facility provides raw material and partially replaces the need for virgin fibres
- In addition to fibres, the plant has to manage rejects present in the incoming OCC
 - Metals
 - Plastic
 - Sand
 - Reject fibres



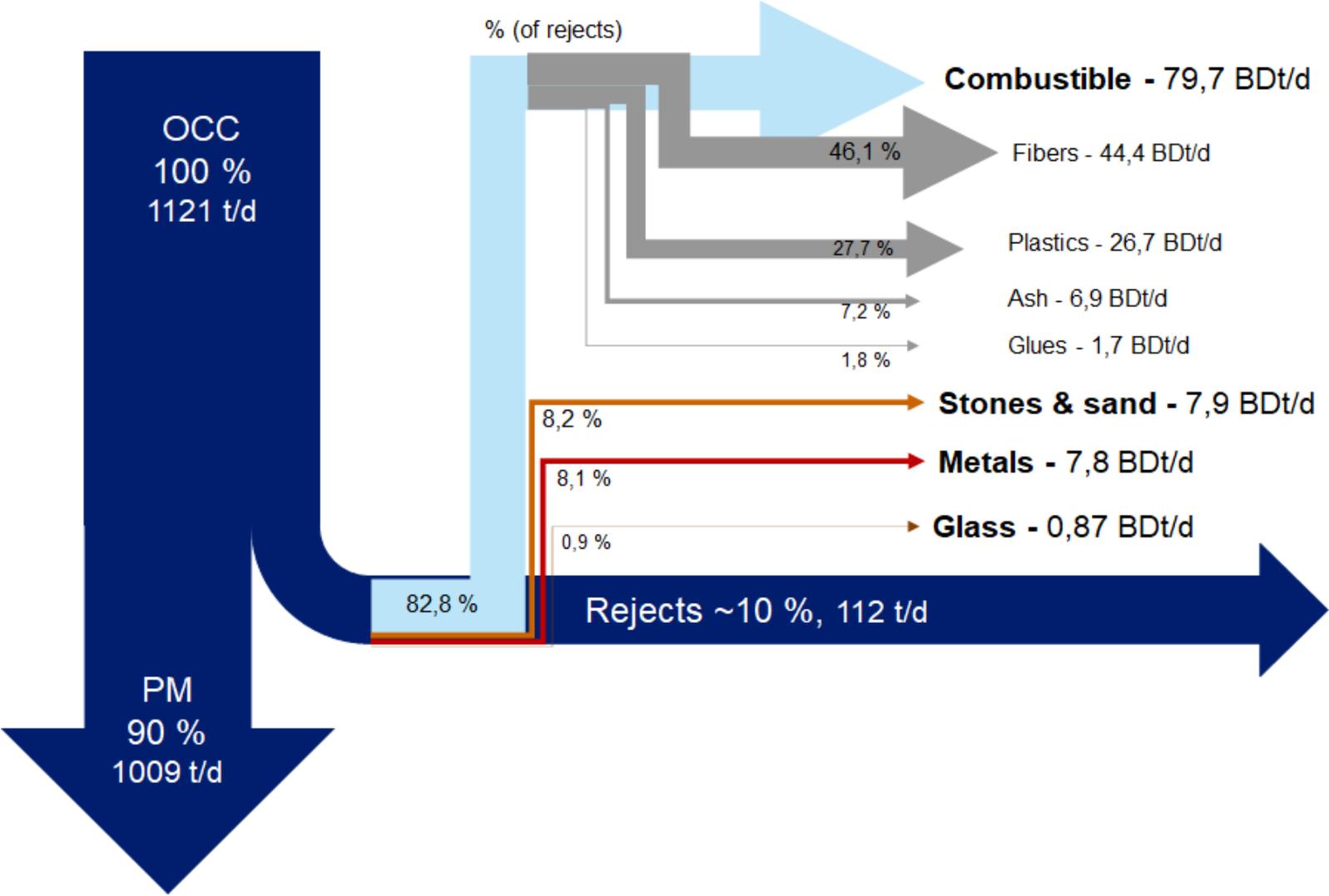
EPC Proposal for an OCC recycling plant



Process steps



Rejects



Assignment:

1. You will form 2 Project Teams (Company X and Company Z)
2. Each Company will act as a an "EPC Contractor" preparing a turnkey quotation for the Client
3. Assignment is to prepare "EPC Quotation for a new OCC recycling plant"
4. Client (AFRY lecturers) will evaluate the Quotations

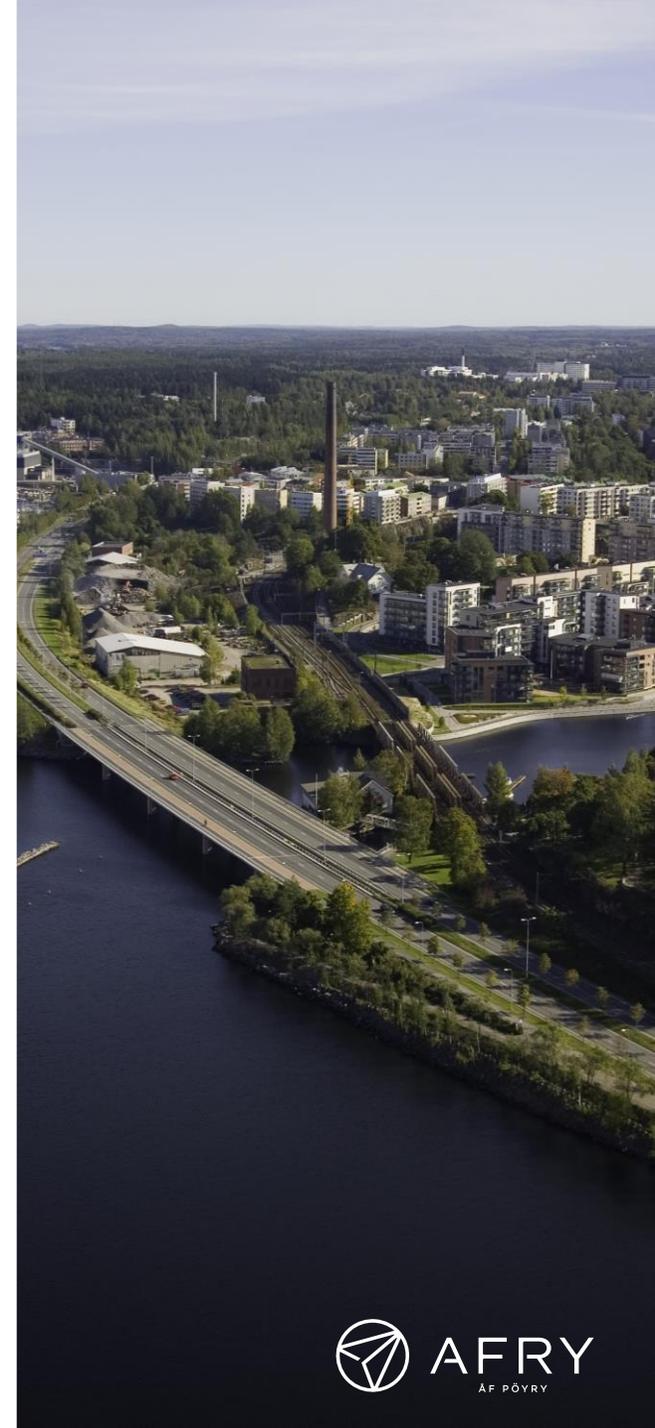
Assignment Schedule

- Work planning can be started now
- Designated sessions for guidance and mandatory progress reporting are organised during October-November 2021
 - *Workshop #1: October 21, 2021 (@TBA)*
 - *Subject: How to prepare a good proposal?*
 - *Workshop #2: November 11, 2021 (@TBA)*
 - *Subject: HSE in proposals, review of time schedules and cost estimates*
 - *Workshop #3: November 18, 2021*
 - *Preparation for presentations, draft presentations, final questions and answers*
 - Each team reports the progress of Quotation preparation status during the workshops
- Final presentation of the prepared Quotation in the “executive summary presentation” format on November 25, 2021



Evaluation

- Evaluation:
 - Peer and self assessment method
 - Mandatory for credits
 - Assignment comprises 50% of the course grade!
 - Course exam other 50%
 - Exam date: 25.11.2021



Where to start?

First tasks for the team

- Proposal organisation, choose Project Manager
- Choose your company's name
- Task and role definitions
- Time schedule for preparing the proposal
- Prepare task list. Who will do what deliverables
- Agree regular meetings with the team
- Study the material! (i.e. read the RFQ =Request for Quotation package)



Teams Formation & Tasks Distribution Principle

– Each team shall execute following task

- Management
 - assignment planning and tasks
 - project organization chart
 - implementation plan
 - manpower planning
 - risks, document handling, presentation and team leading
 - Putting the quotation together, checking everything is in order
- Project controls team
 - cost data & scheduling
 - life cycle cost analysis
- Engineering
 - Equipment list, process description and operating values
 - Layouts & line diagrams
 - HSE

– Team roles (examples)

- Project Management
 - Project or Proposal Manager
 - Coordinator /Document Manager /Procurement Manager
 - Risk /Contract Manager
- Project Controls
 - Time Scheduler
 - Cost Controller
- Engineering
 - Engineering Manager
 - Health, Safety and Environment Manager

Target outcome

- Target is to have competitive EPC Quotation
 - Client can not make the selection only based on low cost, but that is a major factor, cost estimate should be detailed
 - Focus on preparing cost estimate (both investment cost and lifecycle cost)
 - You also must have credible package of project information
 - Scope, time schedule and cost in balance

The assignment output should include:

- Executive summary presentation (max 20 min, and 10 min for discussion)
- Delivery of Quotation package (all the appendices listed in the RFQ)

Groups

Company "X":

- Mikko Hakala
- Roni Heikkilä
- Laura Heine
- Henrik Lindberg
- Virpi Saranpää
- Hertta Seppälä
- Anna Silfverberg

Company "Z":

- Wilma Heinola
- Camilla Inkeroinen
- Vilma Jäämuru
- Kun Ouyang
- Onni Poikkeus
- Ossi Saarinen

Hints and Advice

- Carefully review RFQ documentation first!
 - What should we deliver? Prepare a list of deliverables
 - Put yourself in the Client's shoes: what is the Client asking for / expecting us to do?
 - Separate main items from details
 - Don't get stuck in the details!
 - Search for facts, ask for guidance!
- Do not focus too much on the technology solution, make simplifications, the process is given, you can use that as the basis. The main thing is to put together the material and plan the project.
- Remember progress reporting for the workshops
- Utilize the knowledge gained during lectures, but be prepared to search for advice
- Strive for team cohesion, assign leaders to the objectives, not to the team, and co-operate
- You are supposed to put together a "real" EPC Quotation
- Keep it short and to the point!

Questions?

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