Project Engineering Task

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Project Life Cycle

- ***Initialization***
  - Received specification from Customer

- ***Planning***
  - Estimate the project costs
  - Approve the cost of the project
  - Development of design documentation

- ***Executing***
  - Buy equipment , materials ,parts for assembly
  - Reconstruction of the workshop
  - Installation of equipment
  - Commissioning works
  - Product manufacturing
  - Assembly

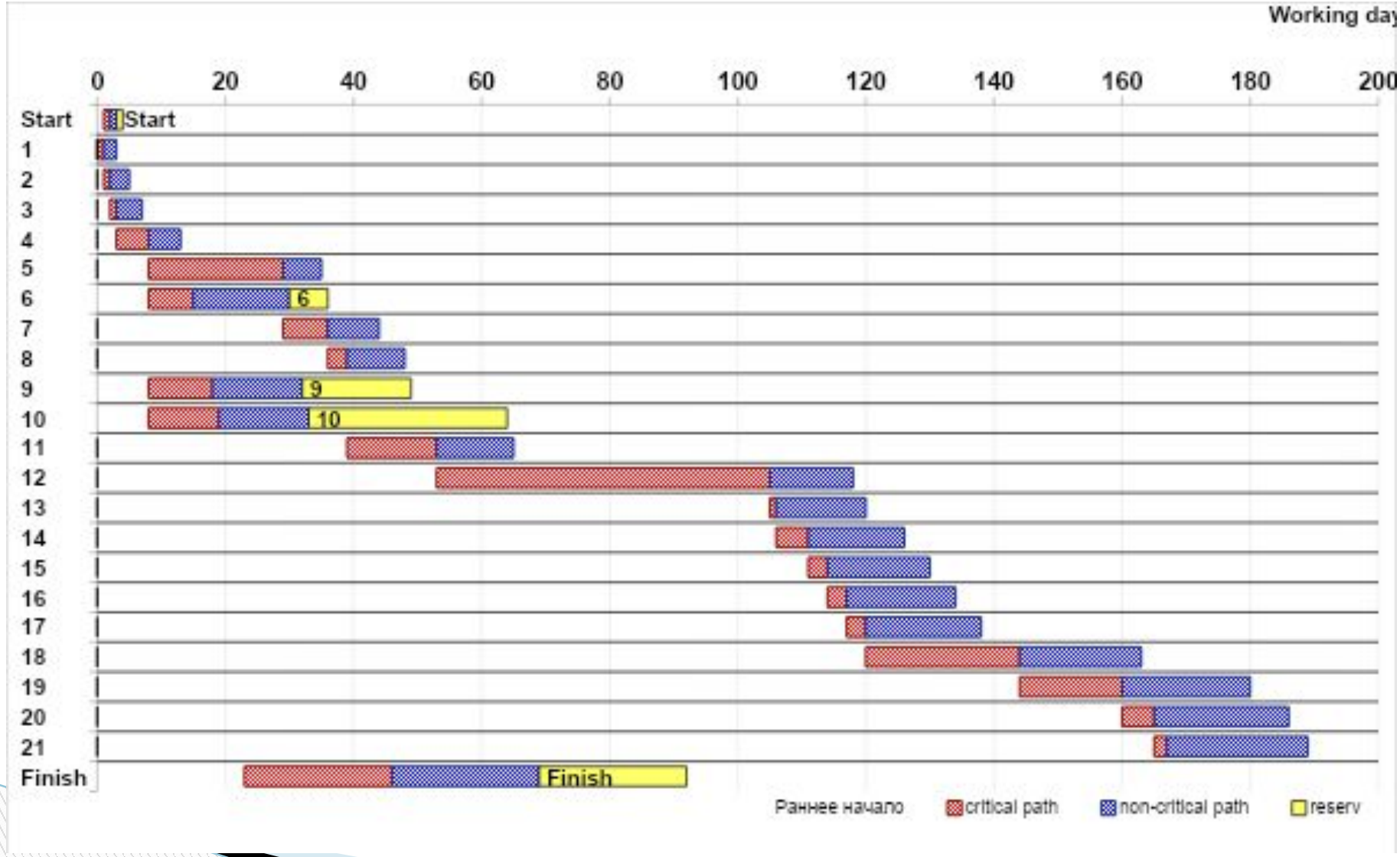
- ***Controlling and Monitoring***
  - First article inspection
  - Design changes
  - Second article inspection
  - Documentation closure
  - Product certification

- ***Closing***
  - Pack and transport products
  - Installation to Aircraft
  - Test installed product and repair defects
  - Handover to Customer

Project Calendar

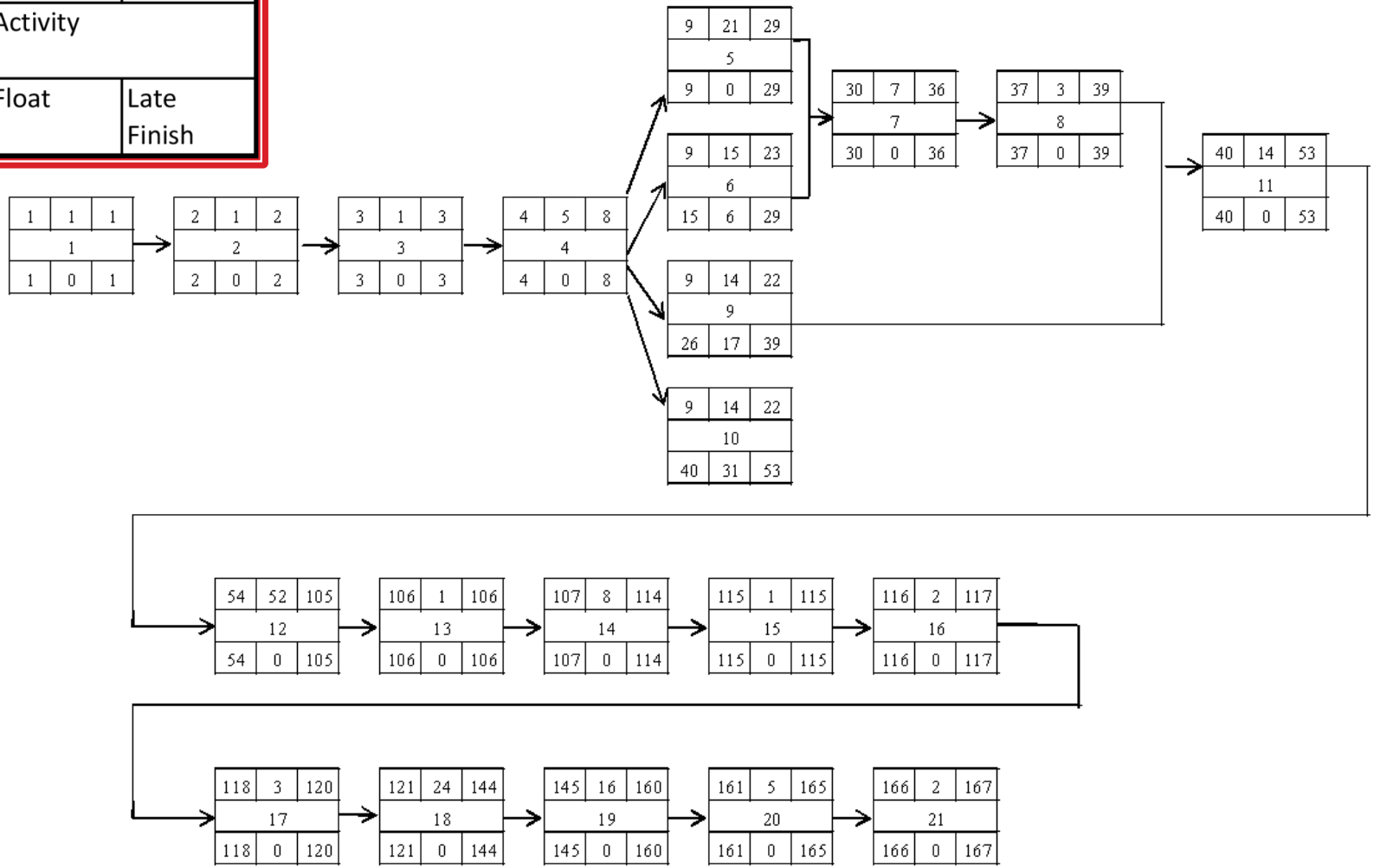
Task code	Task Name	Duration, days	Start date	Finish date	Predecessors
1	**Received specification from Customer**	1	**02.01.2019**	02.01.2019	-
2	Estimate the project costs	1	03.01.2019	03.01.2019	1
3	Approve the cost of the project	1	04.01.2019	04.01.2019	2
4	**Development of design documentation (design data released)**	5	07.01.2019	**11.01.2019**	3
5	Buy equipment	21	14.01.2019	11.02.2019	4
6	Reconstruction of the workshop	15	14.01.2019	01.02.2019	4
7	Installation of equipment	7	12.02.2019	20.02.2019	5,6
8	Commissioning works	3	21.02.2019	25.02.2019	7
9	Buy materials	14	14.01.2019	31.01.2019	4
10	Buy parts for assembly	14	14.01.2019	31.01.2019	4
11	Product manufacturing	14	26.02.2019	15.03.2019	8,9
12	Assembly	52	18.03.2019	03.06.2019	10,11
13	**First article inspection**	1	**04.06.2019**	04.06.2019	12
14	Design changes	8	07.06.2019	18.06.2019	13
15	Second article inspection	1	19.06.2019	19.06.2019	14
16	**Documentation closure**	2	**20.06.2019**	21.06.2019	15
17	Product certification	3	24.06.2019	26.06.2019	16
18	Pack and transport products	24	27.06.2019	30.07.2019	17
19	**Installation to Aircraft**	16	**31.07.2019**	21.08.2019	18
20	Test installed product and repair defects	5	22.08.2019	28.08.2019	19
21	**Handover to Customer**	2	29.08.2019	**30.08.2019**	20

Gantt diagram (duration of work in working days)



Network scheduling (planning)

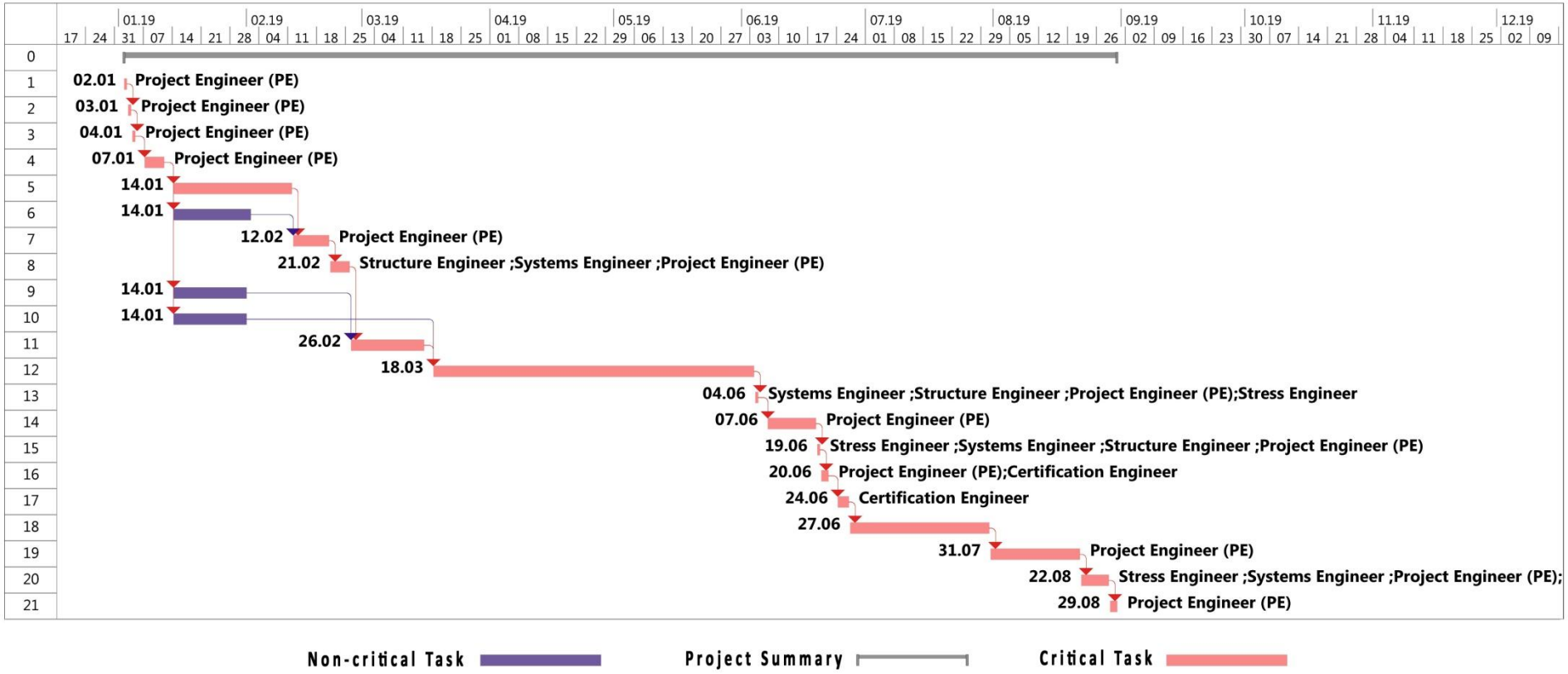
Early Start	Duration	Early Finish
Activity		
Late Start	Float	Late Finish



Project duration Lcr = 167 days

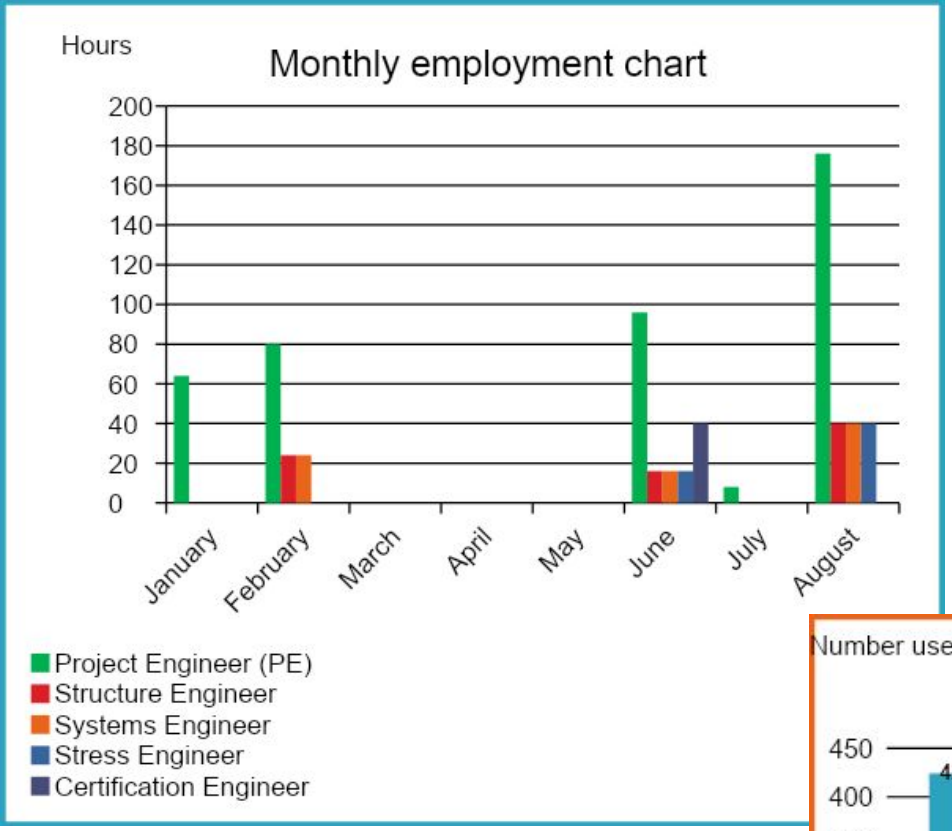
Critical path: 1-2-3-4-5-7-8-11-12-13-14-15-16-17-18-19-20-21

Gantt diagram in Microsoft Project



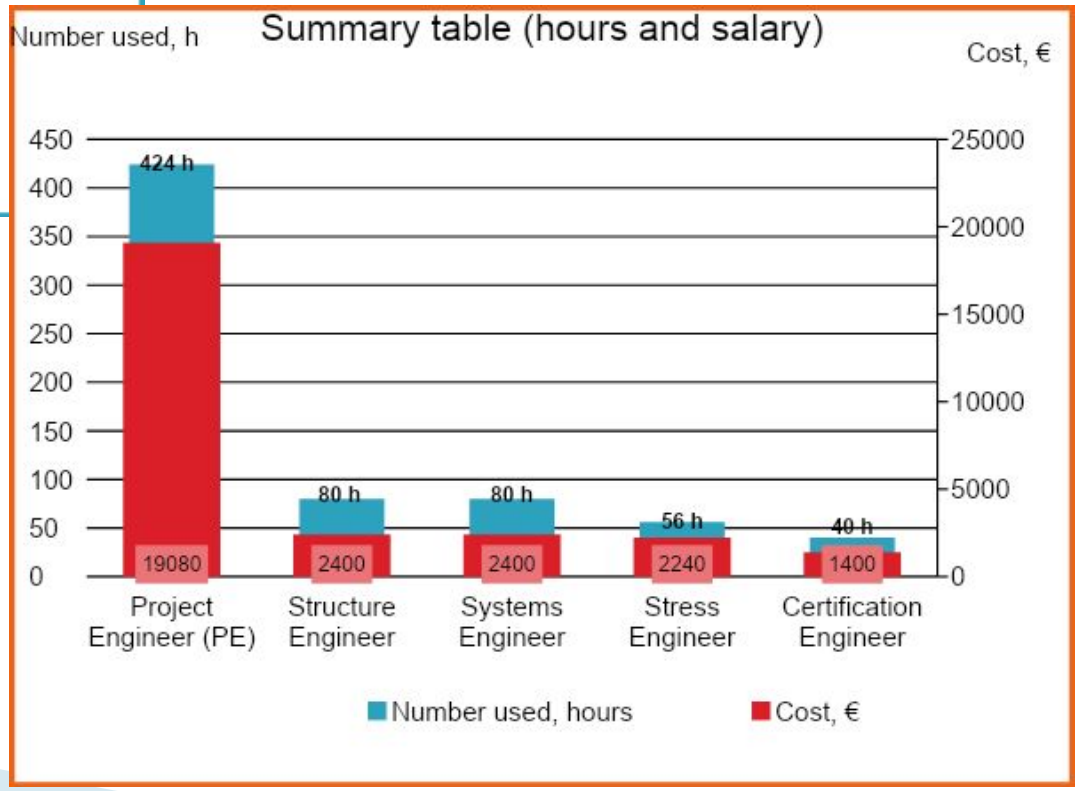
Critical Task. These activities have no float or slack time, because it will cause a delay in the completion of the project.

Non-critical Task. These activities have a certain amount of free time. If this activity is delayed, your project can still finish on time.



	Start Date	Finish Date	Number used, hours	Unit cost, €/hour	Cost, €
Project Engineer (PE)	02.01.19	30.08.19	424	45	19080
Structure Engineer	21.02.19	28.08.19	80	30	2400
Systems Engineer	21.02.19	28.08.19	80	30	2400
Stress Engineer	04.06.19	28.08.19	56	40	2240
Certification Engineer	20.06.19	26.06.19	40	35	1400

Resource Statistics



Recurring cost and Non-Recurring cost

- **Recurring cost**
  - Keeping and exploitation of equipment
  - Workshop expenses
  - Factory expenses
  - Salaries of staff and workers
- **Non-Recurring cost**
  - Purchase of equipment, materials and parts for assembly
  - Repair of equipment
  - Defective product expenses
  - Expenses of packaging and transportation of finished products

Risk Assesment

Failure to meet deadline	To detail the work plan.
The influence of external suppliers	Work with several suppliers of
One employee in too many tasks	Properly distribute resources
Overtime work	Exclude overtime work.
Financial risk	It is possible to reduce financial
Emergencies	To insure the funds to cover

Thank you for your consideration.