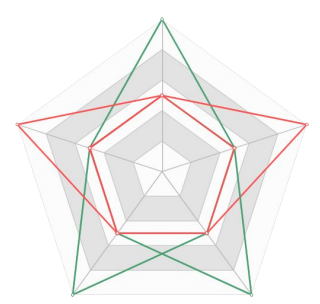


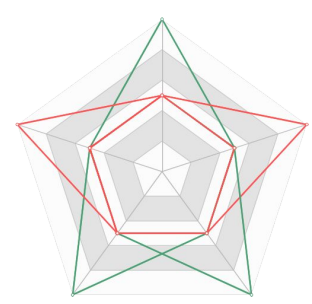
Project Plan





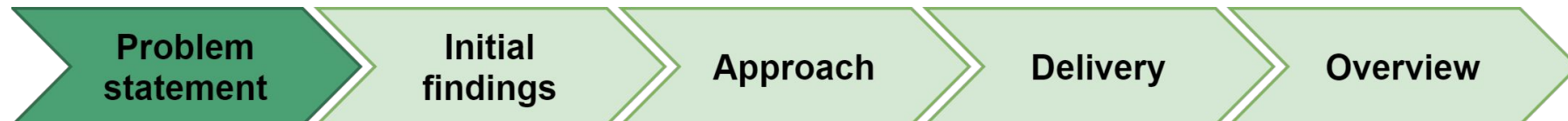
Agenda

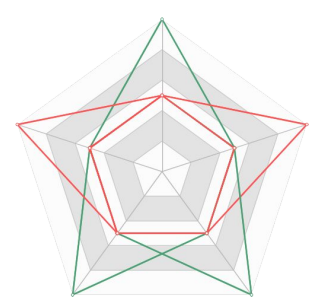
1. Problem statement
2. Initial findings
3. Approach
4. Delivery
5. Overview



LG.Philips is looking to invest in a 6th generation TFT-LCD production facility

- ◆ LG.Philips: **market leader** with almost 24% of the market share
- ◆ The question you asked Penta Consultants is:
Should the investment in a 6th gen TFT-LCD production facility be made?
 - ◇ *Uncertain factors*
 - ◇ *Multiple product options*

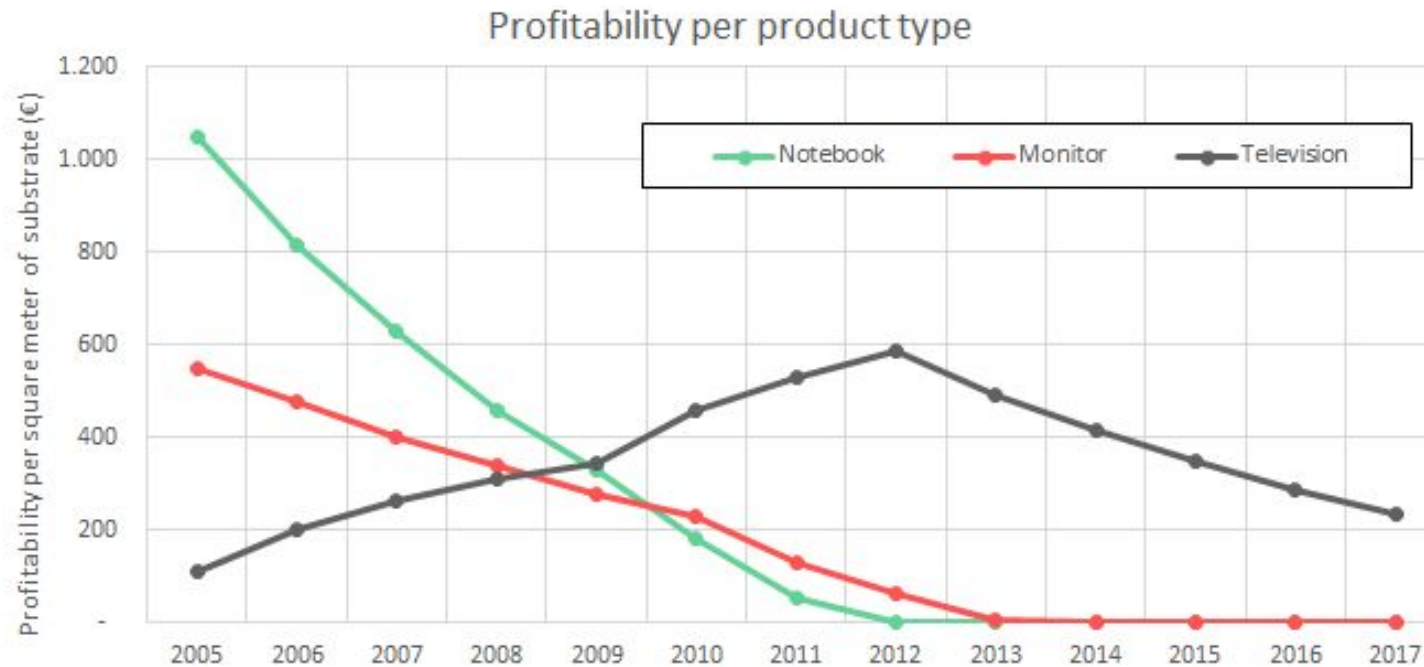




The data indicates that the profitability of televisions will increase over time, until 2012, and as such the optimal solution should reflect this

Televisions will become **more** profitable than notebooks and monitors over time.

=> Optimal solution of products likely to change over time.



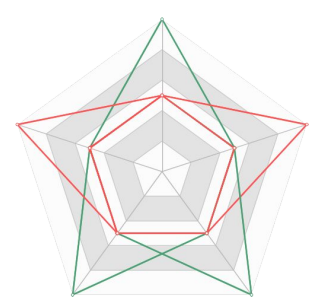
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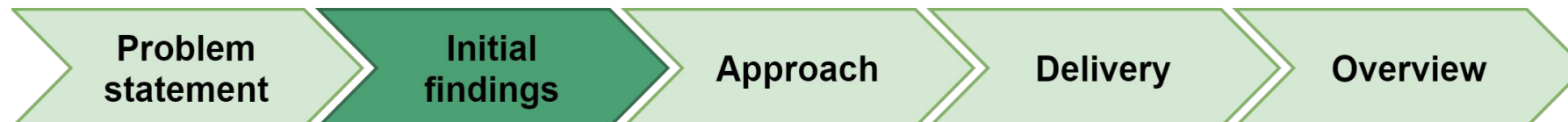
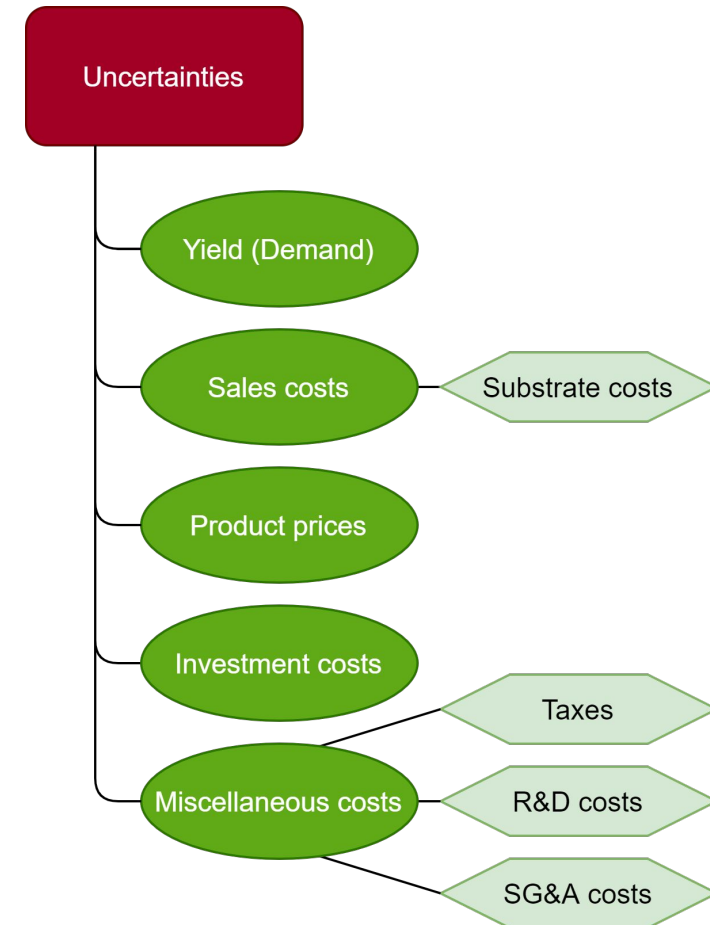
Overview

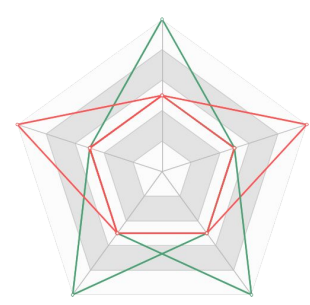


There are, however, many uncertainties to take into account when determining the optimal solution which maximizes the Net Present Value (NPV)

Influential uncertainties are:

- ◆ **Demand yield:** How much of our production can we actually sell?
- ◆ **Television demand:** What size of televisions will be in-demand in the future?
- ◆ **Product prices:** What will be the market prices for our products?
- ◆ **Sales costs:** How high are the costs per substrate?
- ◆ **Investment costs:** How much do we need to invest?
- ◆ **Miscellaneous costs:** Other costs such as tax, R&D, and SG&A.

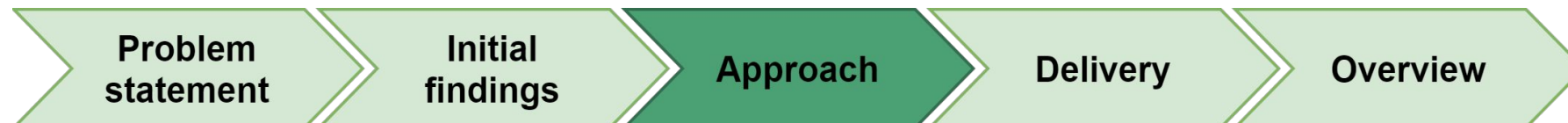
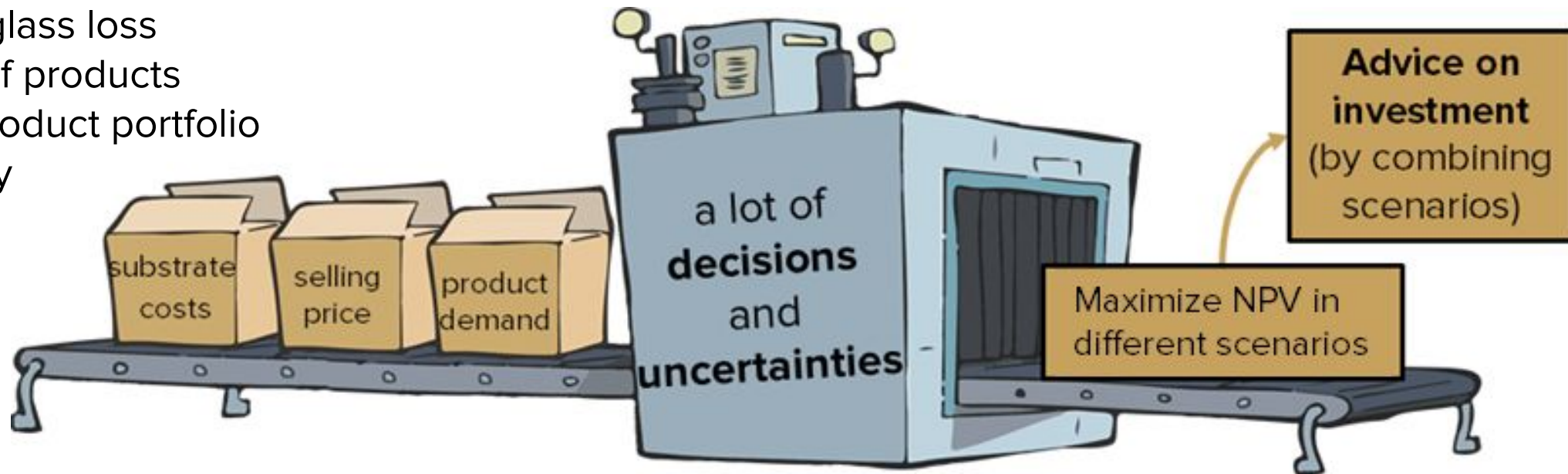


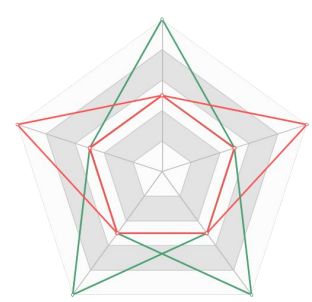


Different uncertainty scenarios, regarding substrate costs, product selling price and yield, will be used to produce the optimal solution

Factors of optimality:

1. Direction of products on substrate
2. Substrate size
 - Minimize glass loss
3. Composition of products
 - Diverse product portfolio
 - Profitability



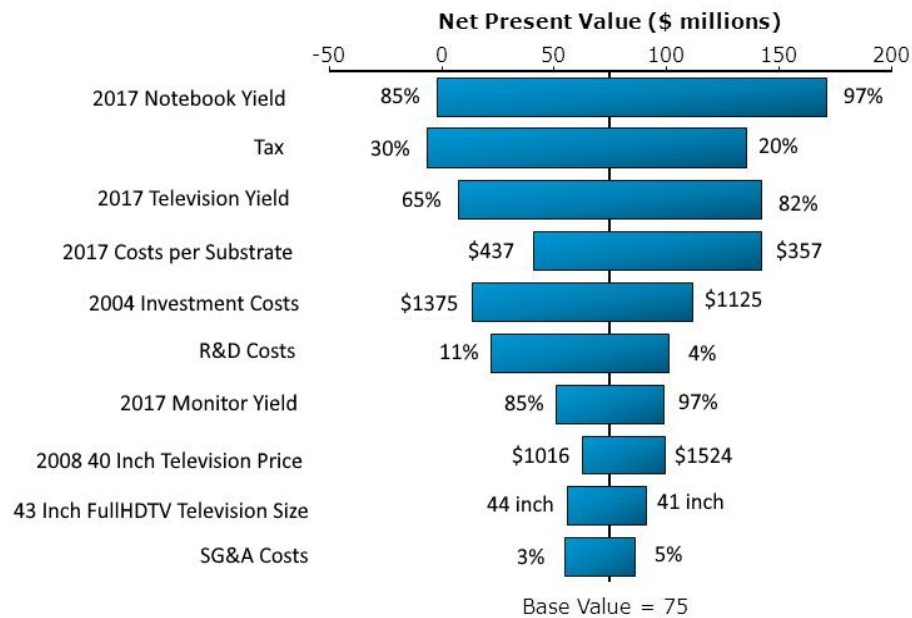


Penta Consultants will deliver all necessary information so that that you can make the best investment decision

NB: These charts are made for illustration purposes and are not based on calculations or other analyses

Tornado chart

How does uncertainty affect your investment opportunity?



Decision matrix

How do different options satisfy your requirements?

Option	Positive NPV	Remain Market Leader	Minimal Risk
Invest and accept more risk <i>* E.g. allocate more substrates to TVs or assume tax won't be too high.</i>	Yes	Yes	No
Invest and accept less risk <i>* E.g. allocate substrates in a more balanced way and consider a possibly high tax.</i>	Yes	Yes	Yes
Do not invest	Yes	No	Yes

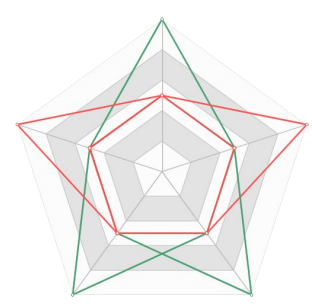
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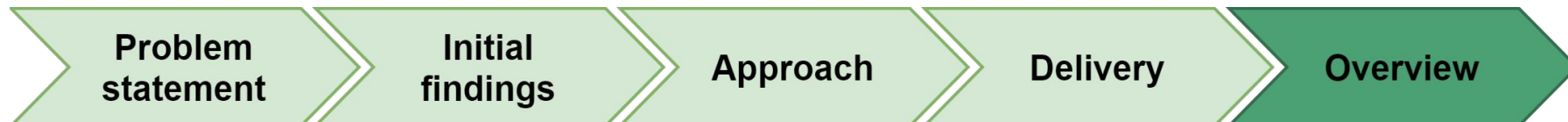
Delivery

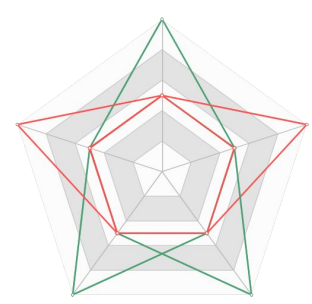
Overview



The optimization process will be based on many different assumptions. Here is a selection.

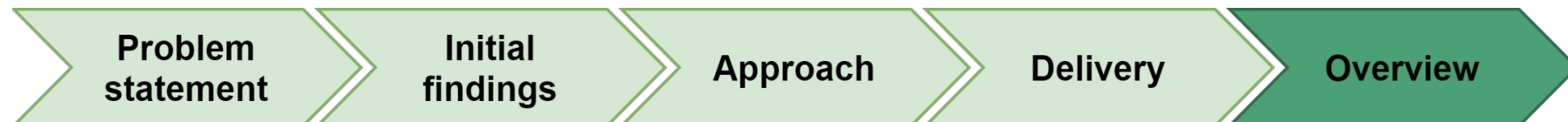
- ◆ The data are accurate.
- ◆ 6th generation is essential to stay market leader.
- ◆ No extraordinary political/labor/environmental influences on production rate or demand.





Penta Consultants will run several optimization scenarios, enabling you to make the best possible investment decision

- ◆ LG.Philips is looking to **invest** in a 6th generation TFT-LCD production facility.
- ◆ Initial data analysis suggests that televisions become more profitable over time than monitors and notebooks.
- ◆ The **Net Present Value** will determine whether the investment is profitable.
- ◆ **Many uncertainties** influence the Net Present Value.
- ◆ Different scenarios will be analyzed to produce the **optimal weighted solution**.





Thank you for your time and attention

We would love to answer any questions you may have.

Contact

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