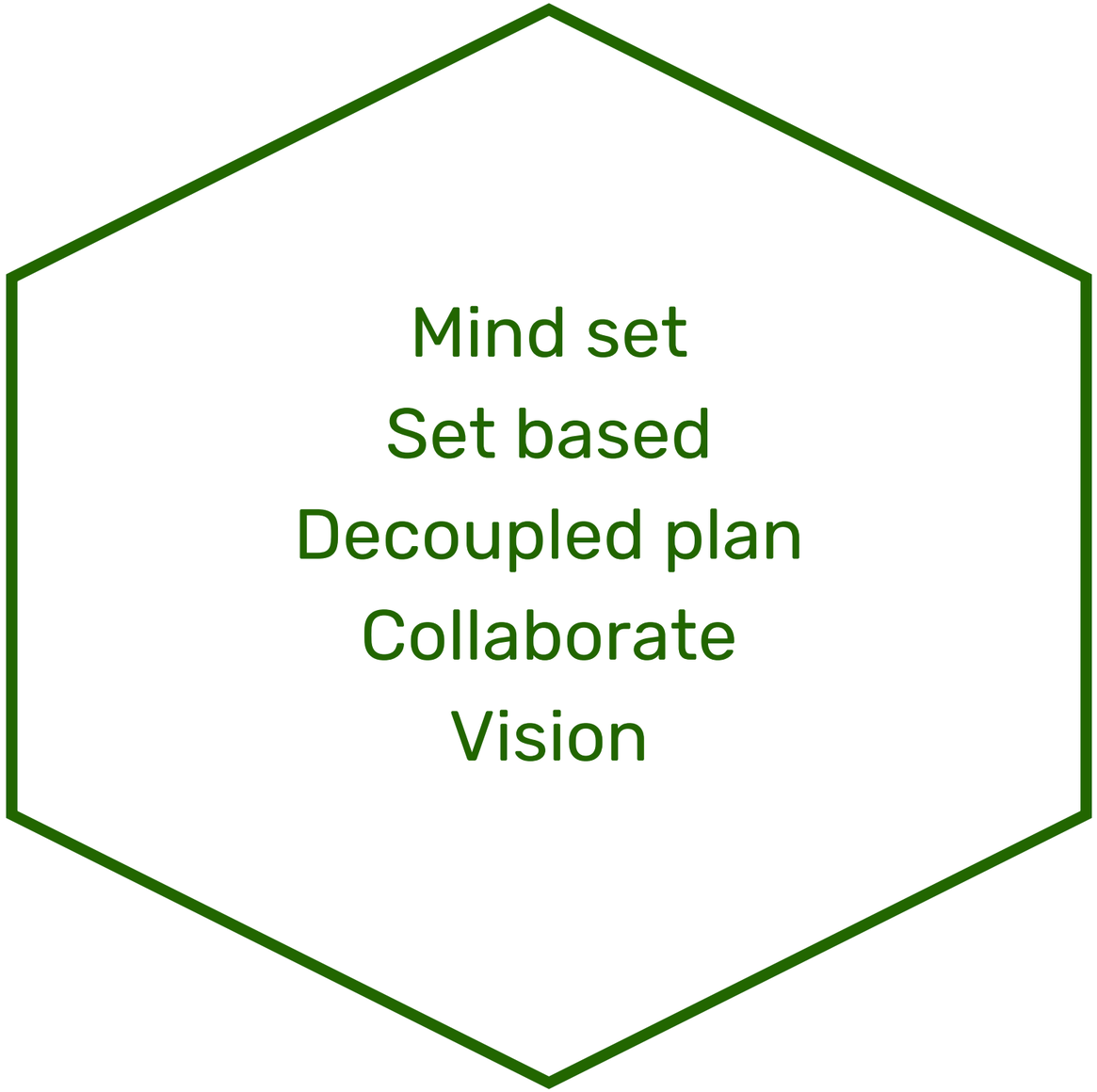
Innovation mindset and challenges

Sharing experiences from over 25 years of development and problem solving


Mind set
Set based
Decoupled plan
Collaborate
Vision

Mind set

Problem?

- Understanding
- Learning
- Engagement
- Motivation
- Curiousity

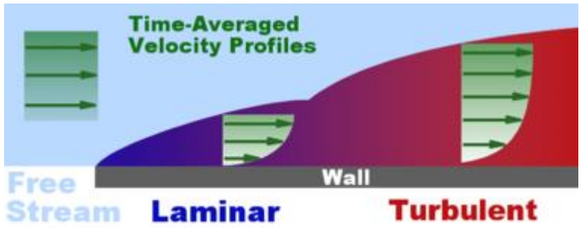
What is the best solution?

- Test
- Iterate while learning
- Do not chose “the best”
- Deselect the worst
- Let people work with what they believe in

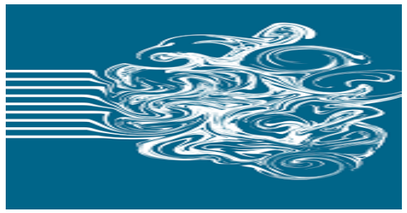
Wilbur's logbook showing diagram and data for first circle flight on September 20, 1904

https://en.wikipedia.org/wiki/Wright_brothers

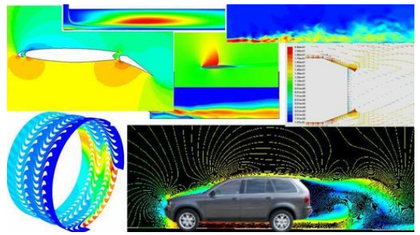
Wilbur flying almost four circles of Huffman Prairie, about 2¾ miles in 5 minutes 4 seconds; flight 82, November 9, 1904.



https://sv.wikipedia.org/wiki/Gr%C3%A4nsskikt



www.ltu.se



www.kth.se

Mind set

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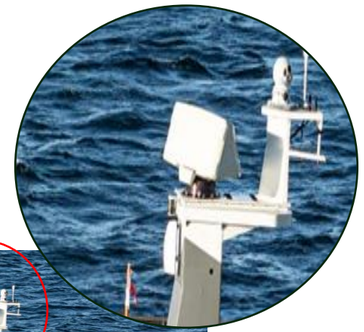
“There are no problems – only solutions!”

Radar antennas

- Features/use cases
- Mockup (wood and ropes)
- Multiple solutions/teams
- Iterate and test
- Scale up
- Expand

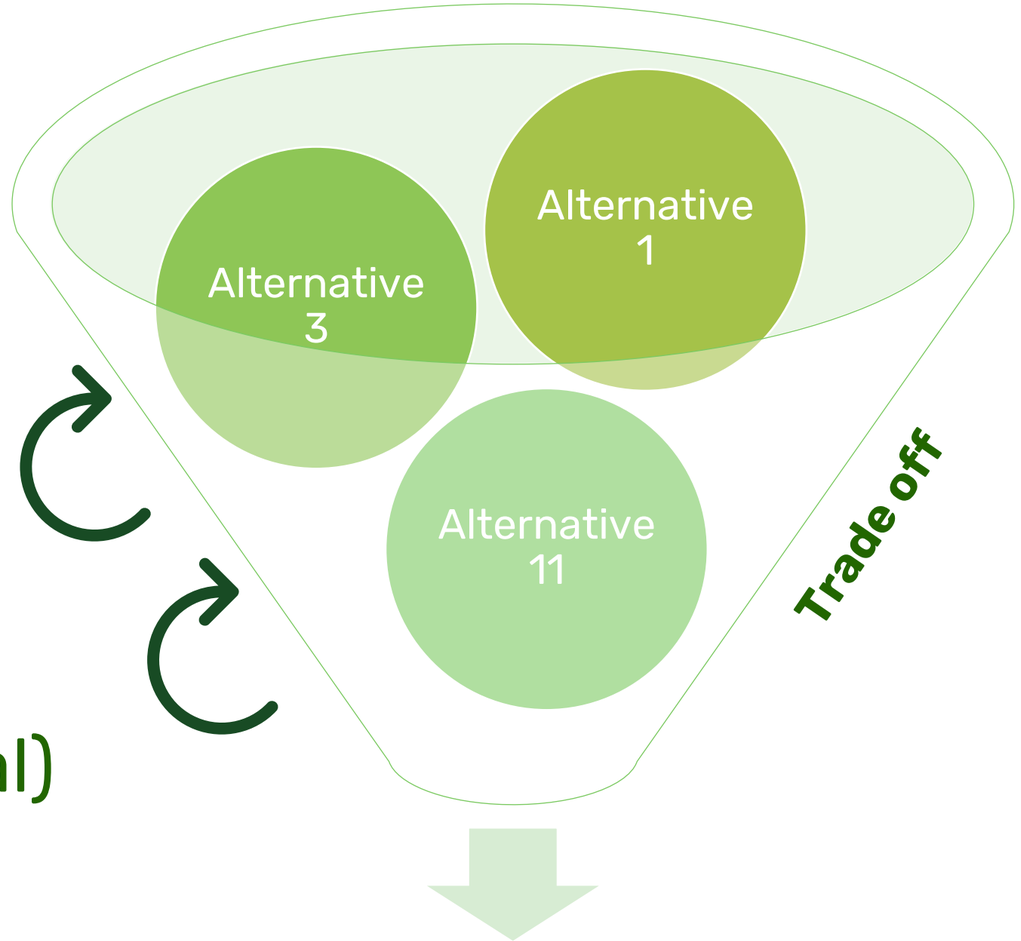


https://www.saab.com/products

https://www.forsvarsmakten.se/sv/aktuellt/2022/09/marinen-testar-obemannade-system/

Work set-based

Iteration with
-Use cases
-Deselection criteria's*
-Boundary conditions
-Non negotiables (physics & legal)

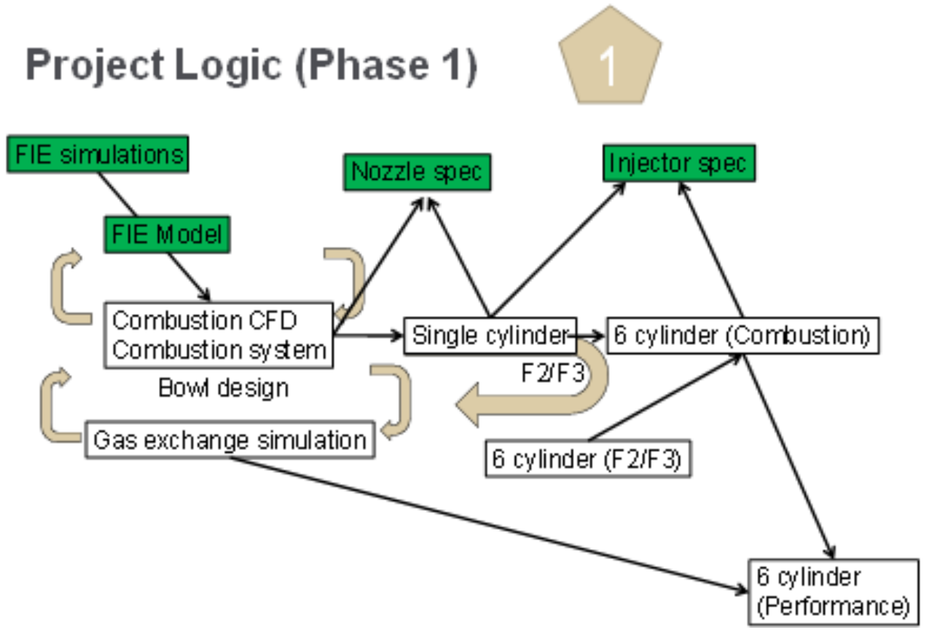


Mature multiple alternatives

Ensure fallbacks and robustness for requirement change

**Note: You deselect from importunateness and trade off's. Common misconception is that requirements are fixed. Everything is negotiable except for physics and most often legal requirements (but the later also changes)*

“Most powerful…” “Reduced fuel consumption…”



Iterate & Trade off

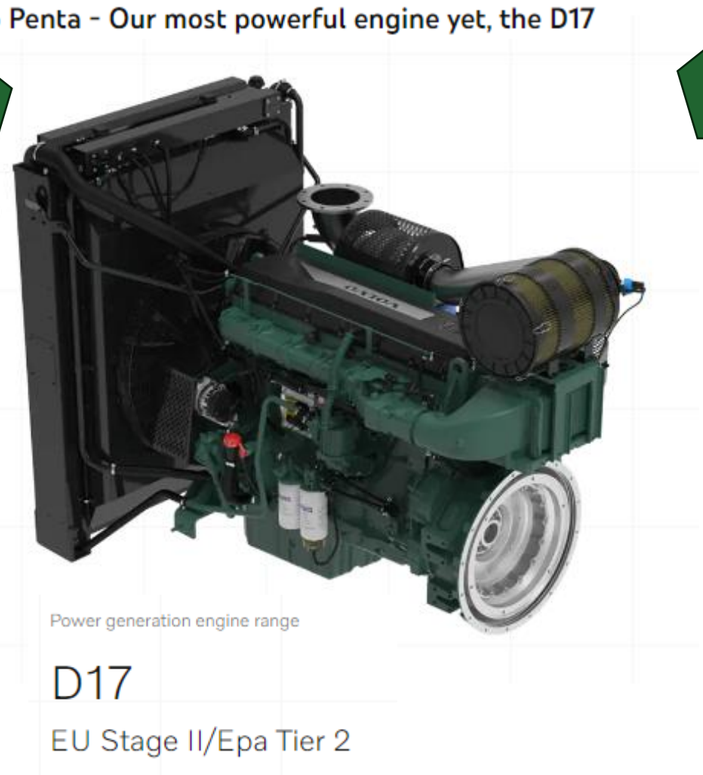
2

Trade off

3

Time & Timing

?



https://www.youtube.com/watch?v=QtoyGncRuuc

Development of
a new combustion system

Decoupled plan

and NO waterfall!

Time

- Mature technology/iterate
- Multiple alt. & fallbacks
- Stakeholders
- Customers

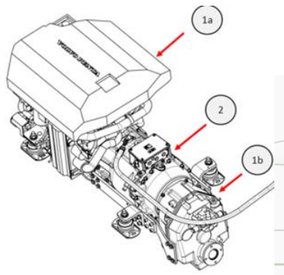
Timing

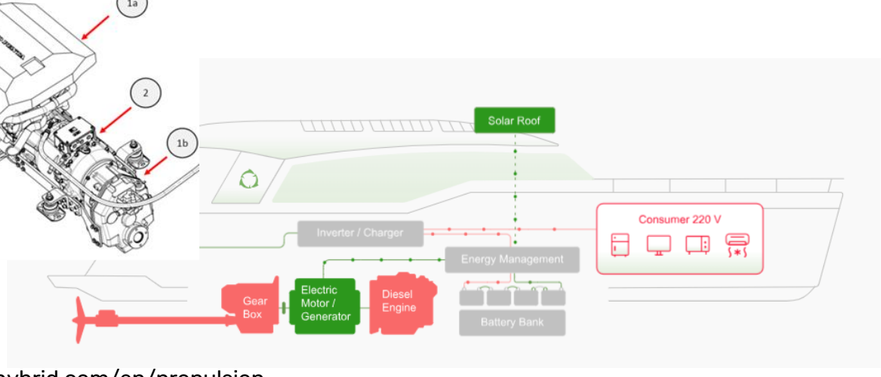
- Market
- Budget/funding
- Decision making
- TRL
- MVP

Volvo CE introduces a range of futuristic concepts: a serial-hybrid wheel loader

https://www.volvotrucks.se/sv-se/news/press-releases/2022/jun/volvo-trucks-showcases-new-zero-emissions-truck.html

https://www.volvoce.com/global/en/about-us/who-we-are/our-history/





https://www.greenlinehybrid.com/en/propulsion

Protium

Decoupled plan
and NO waterfall!

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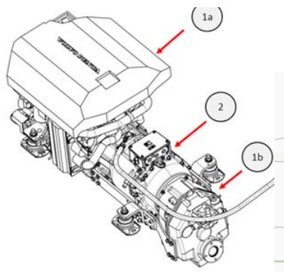
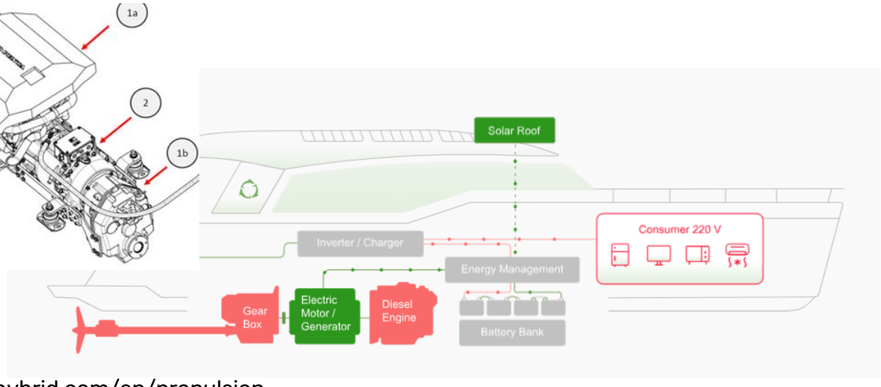
https://www.volvoce.com/global/en/about-us/who-we-are/our-history/

"Be persistent!"





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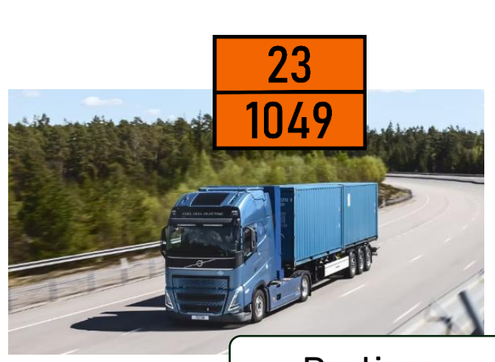

Protium

"THE WASP"

A SUSTAINABLE POWER SOLUTION

Collaborate

Public/teamwork

- Develop your strengths (USP)
- Co-work for leverage
- Shared risk
- “Fly-wheel concept”
- Followers/participants
- Share=>cost and marketing

Secrete/individual

- Military
- IP (limited in time)
- Personal
- Commercial agreements
- Keeping others key assets

https://www.youtube.com/watch?v=h08MwBZl-Vc ”make a movement”

Reclaiming waterways

Cstrider’s smart transport system – closing the gap!

Only solutions

Fallbacks

Be persistent

“Fly wheel”

Share your vision

& collaborate

Thank you

Tobias Husberg

+46 722 120221

tobias.husberg@cstrider.com

www.cstrider.com

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Incubator

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