Creating an employee planning application that can be trusted

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Agenda

01 The planning problem

02 The solution

03 Overcoming challenges

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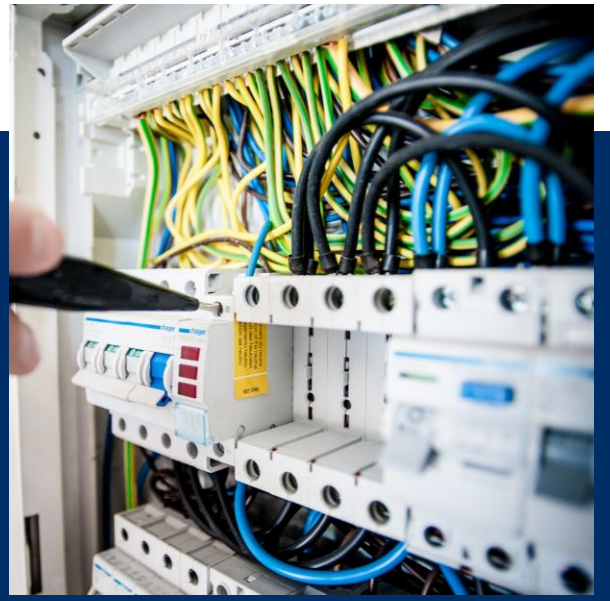
The planning problem

- Customer service department of an international manufacturing company
- Allocating specialized employees to on-site installations and upgrades of highly complicated machines
- Constraints on skills, travel, etc



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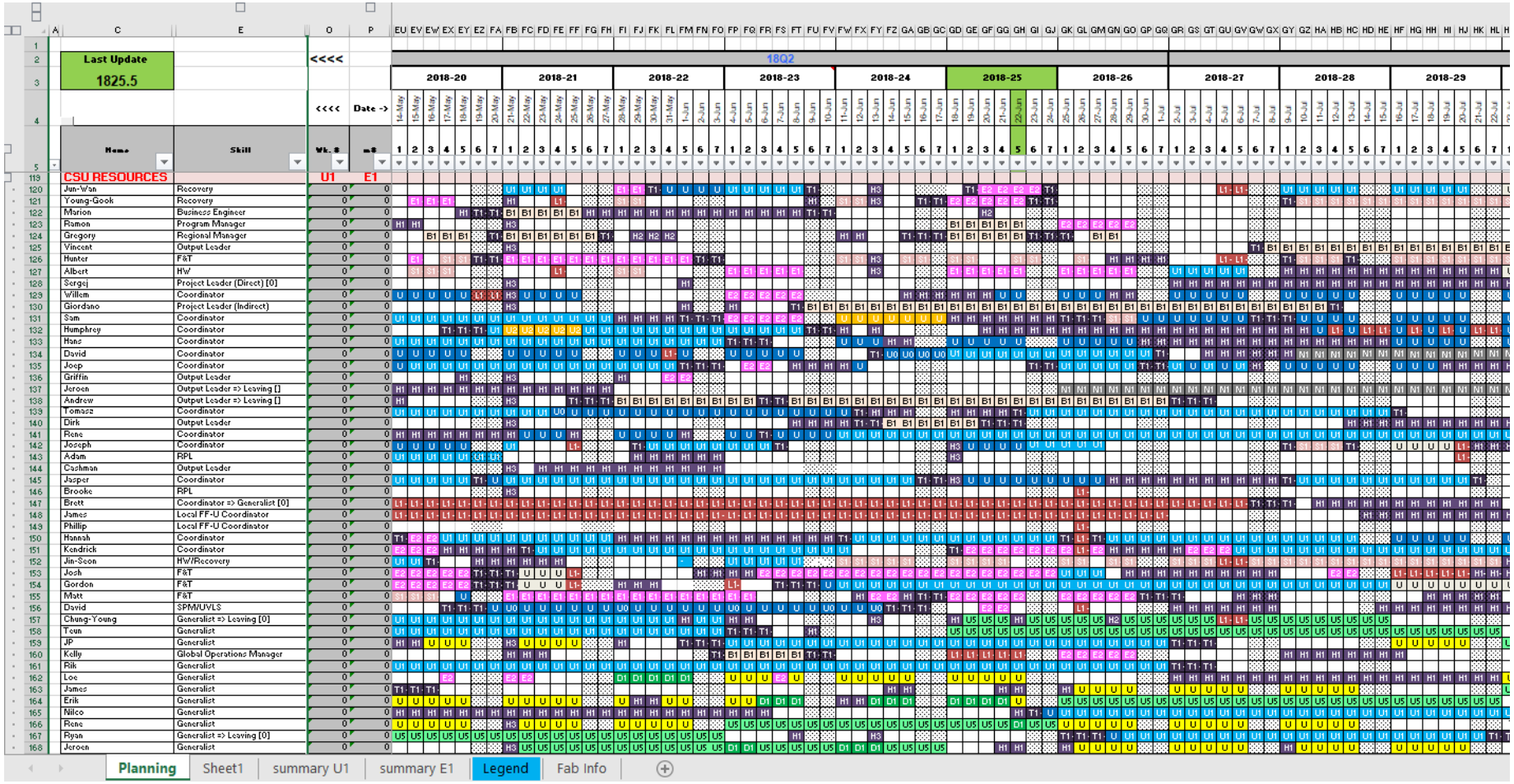
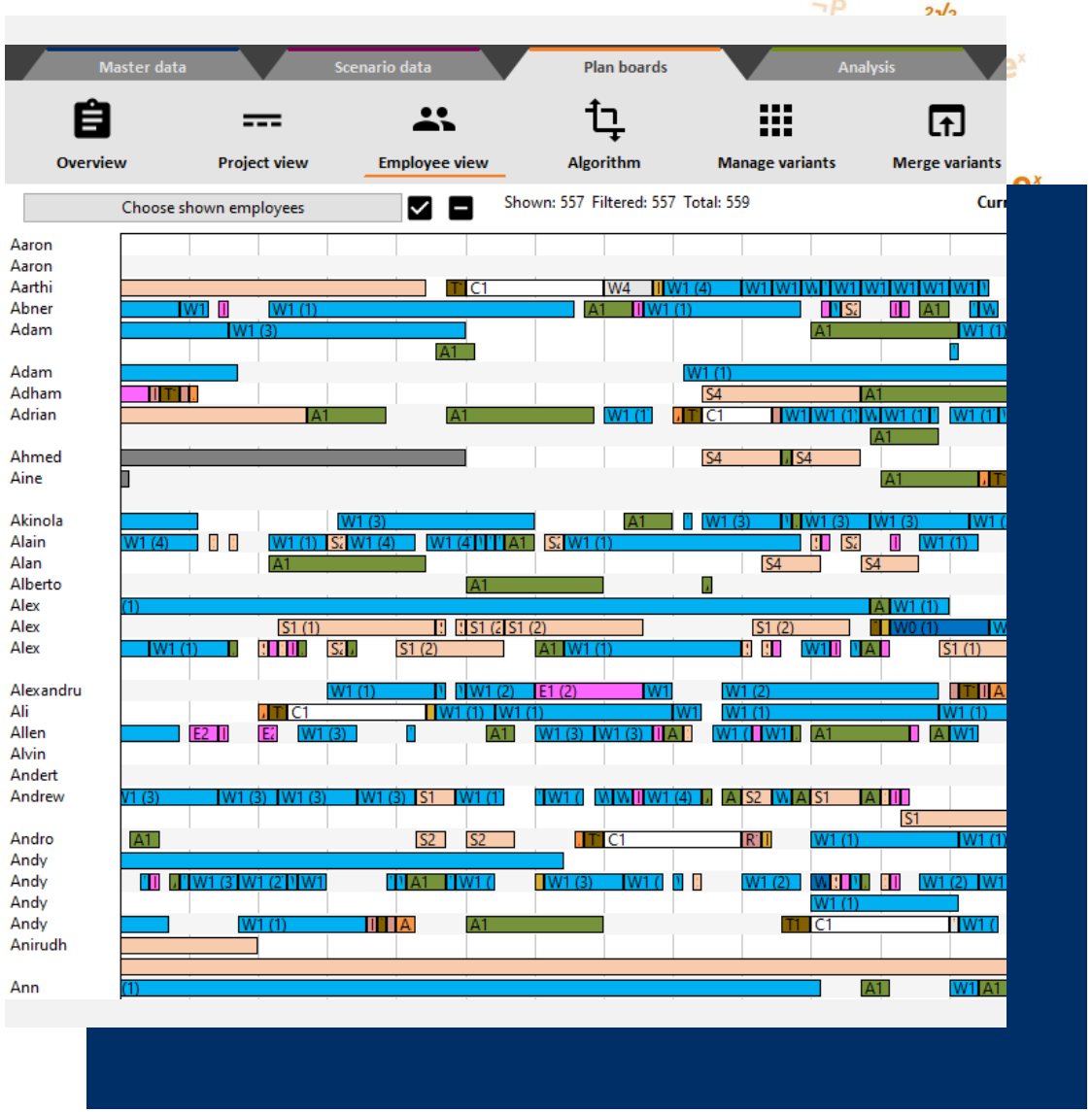
Previous solution: Excel



New solution: AIMMS

- Supports manual planning in many ways
- Adds automated planning via (partial) GRASP heuristic
- Easy scenario creation and comparison
- Concurrent planning



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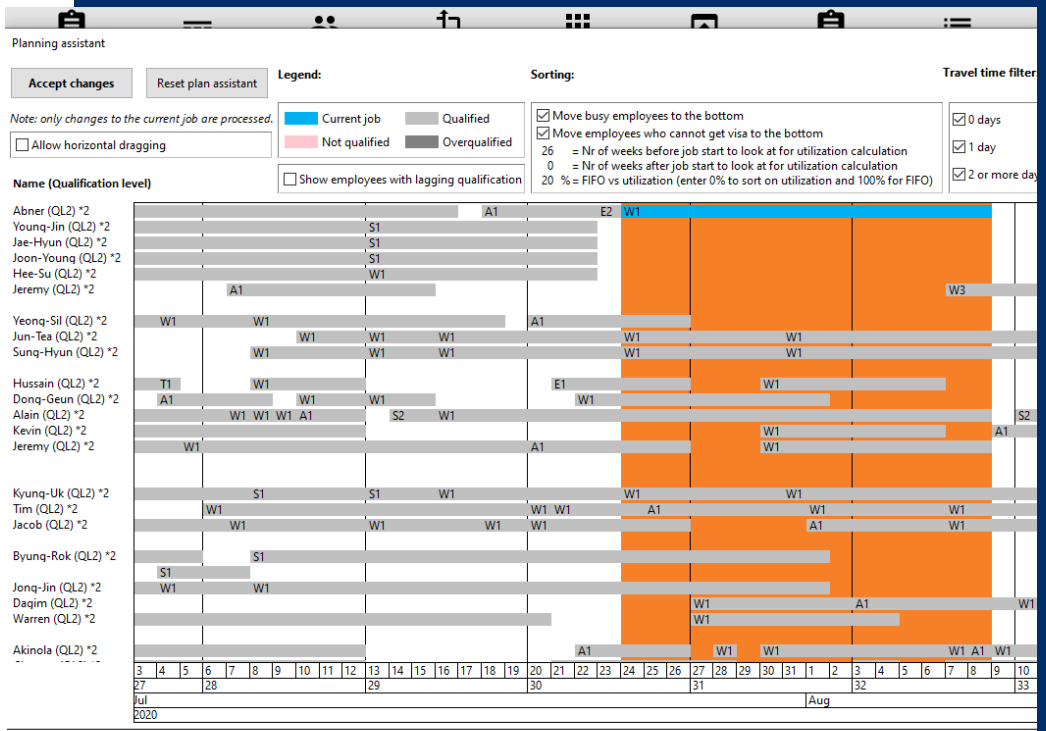
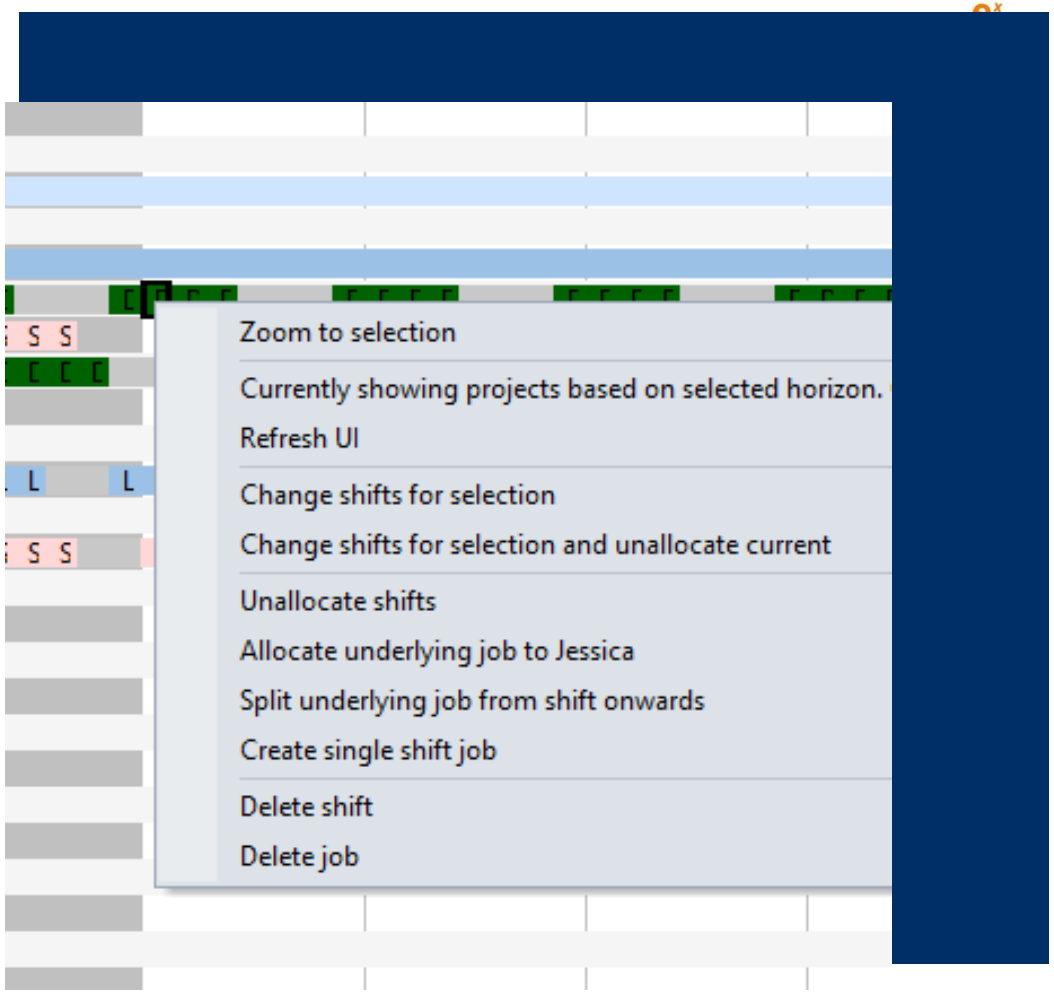
Challenge 1: Trust the algorithm

- Manual planning before automated planning
- Conscious decision-making
- Heuristic is good enough and less of a black box
- Rescheduling mode
- Time for support: answer questions, check results



Challenge 2: Truly throw away Excel

- Quick feedback loops and agile project
- Implement things that make life easier
  - Pitfall: too many options make the application hard to learn
  - Pitfall: balance between automating options and ‘black box’
- Make it easy to go back (but more attractive to stay)
- Be available in-person as much as possible
- Buy-in from management



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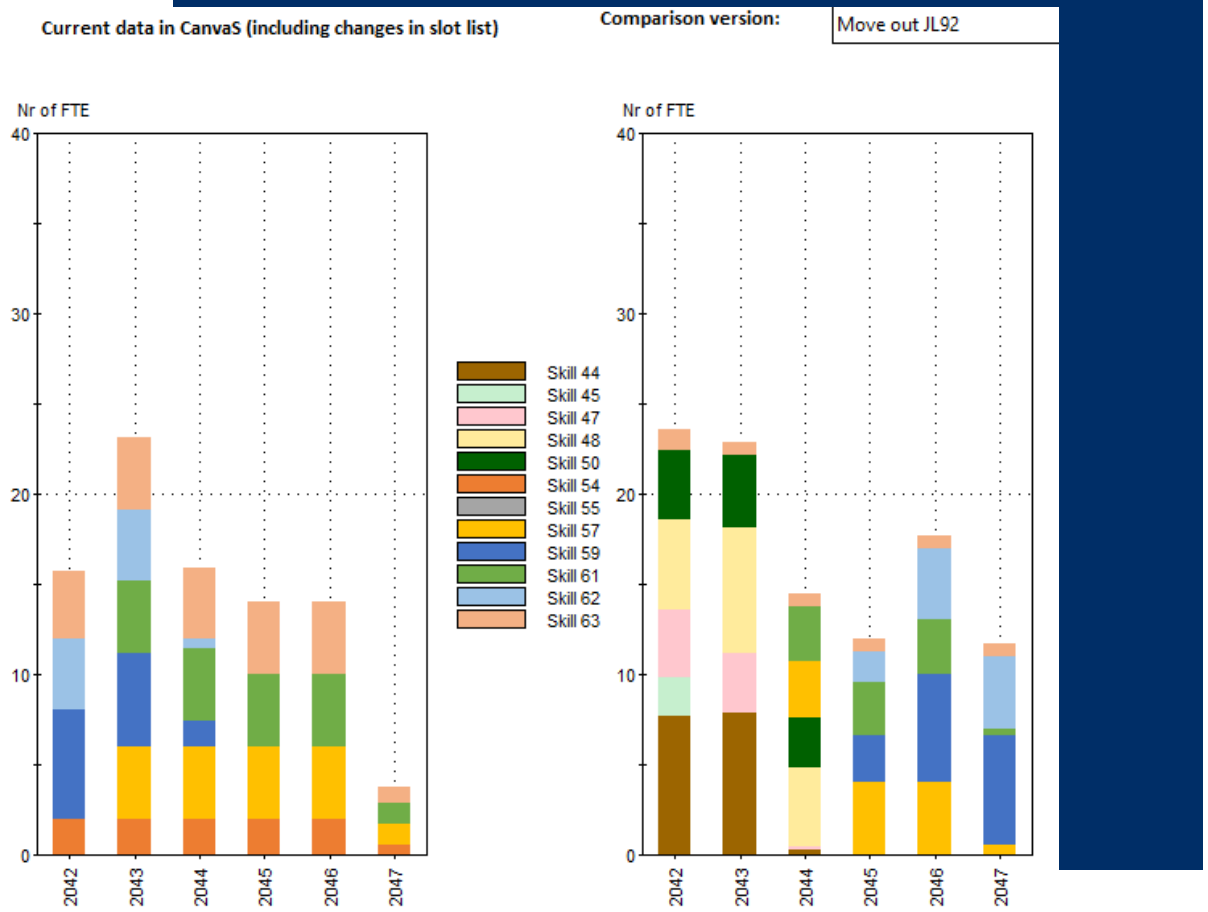
Challenge 3: Never go back to Excel

- Have a clear plan for Maintenance & Support afterwards
- Stay in contact, be available on-site
  - More difficult in current (corona) situation
- Easy scenario creation/implementation

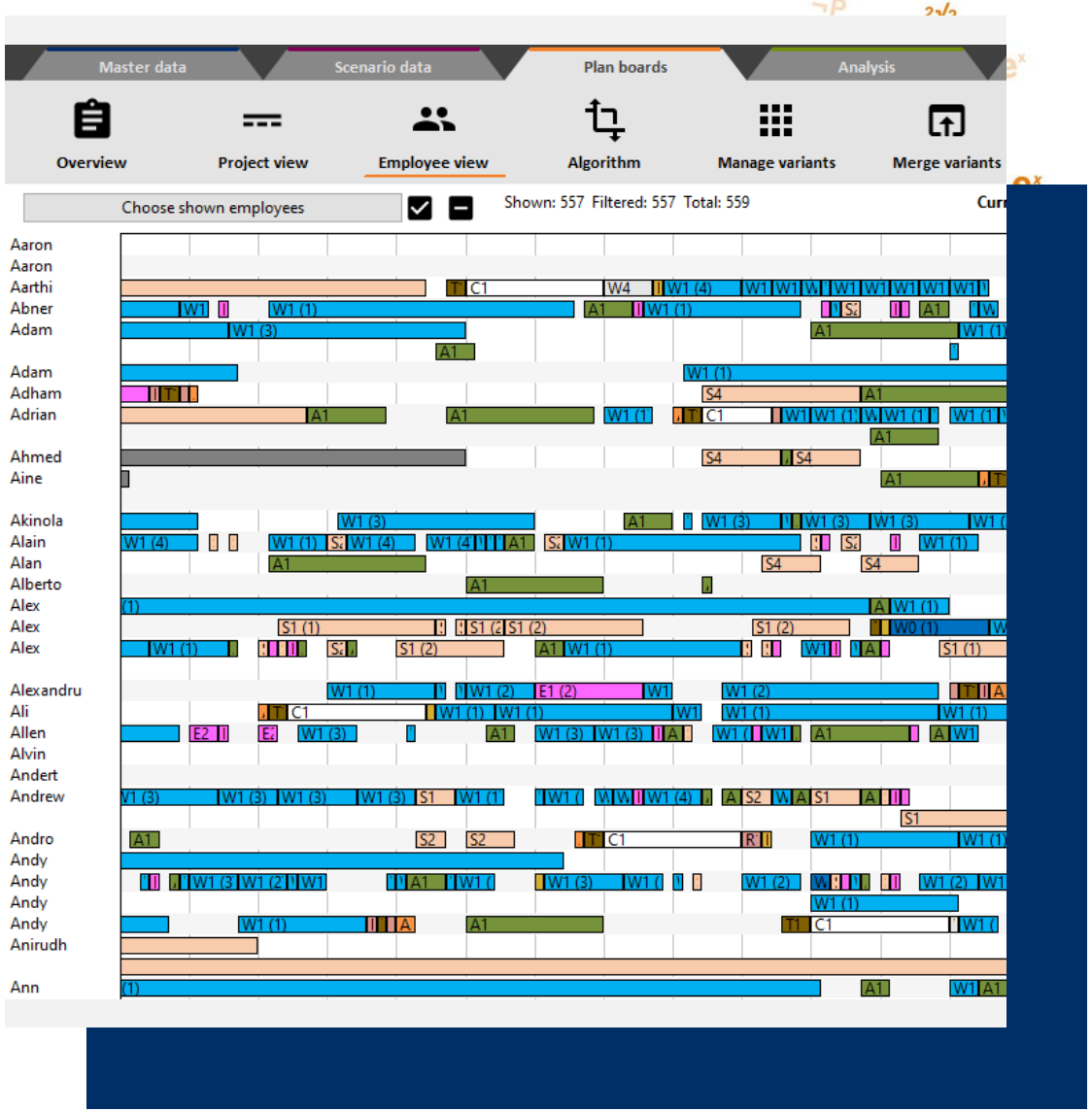


Challenge 4: Before you start saving time, it costs a lot of time

- Dedicated project team with buy-in from management
  - Manage expectations
- Proof of Concept with one enthusiastic department

Challenge 5: Not everyone is happy with more clarity and standardization

- Ensure that the application contains enough pro’s for all
- Accept that you cannot make everybody happy



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Result

- Application is now used to plan >1000 employees
- Planners are happy:
  - Management questions can be answered much faster
  - Focus on more interesting things than updating Excel
  - Working together is much easier
  - Support crisis situations (e.g. corona)
- Algorithm is used more and more
- Further extensions planned for the future

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Main takeaways

- Building trust is the most important challenge
- Communication and building relations is key
- Happy users are your best advocates

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