

Engineering a data-driven approach to deliver smarter maintenance

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Which technical approach?

Can I trust the data?

Do I have the right data?

Do I have enough data?

How long will it take?

Uncertainty

What accuracy is needed?

How much will it cost?

How much of an improvement will it make?

What's the ROI?

How do I keep the solution up to date?

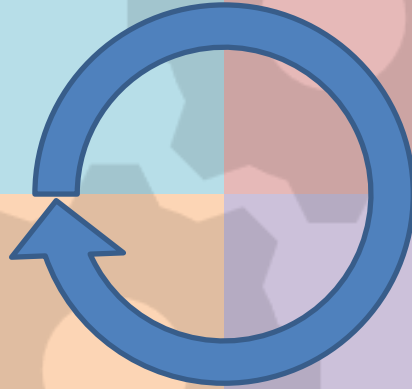
How do you maximise effort on successful projects while minimising effort ones that would fail?

Business objectives

Data

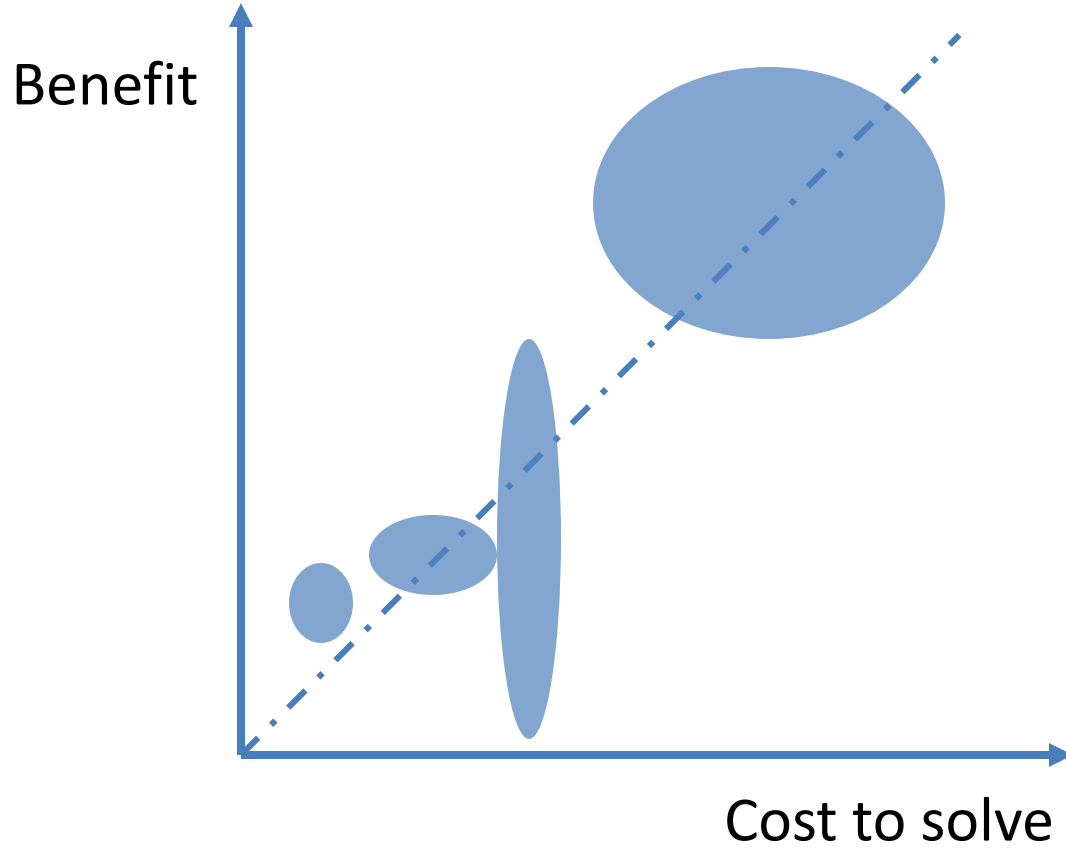
Deployment

Solution



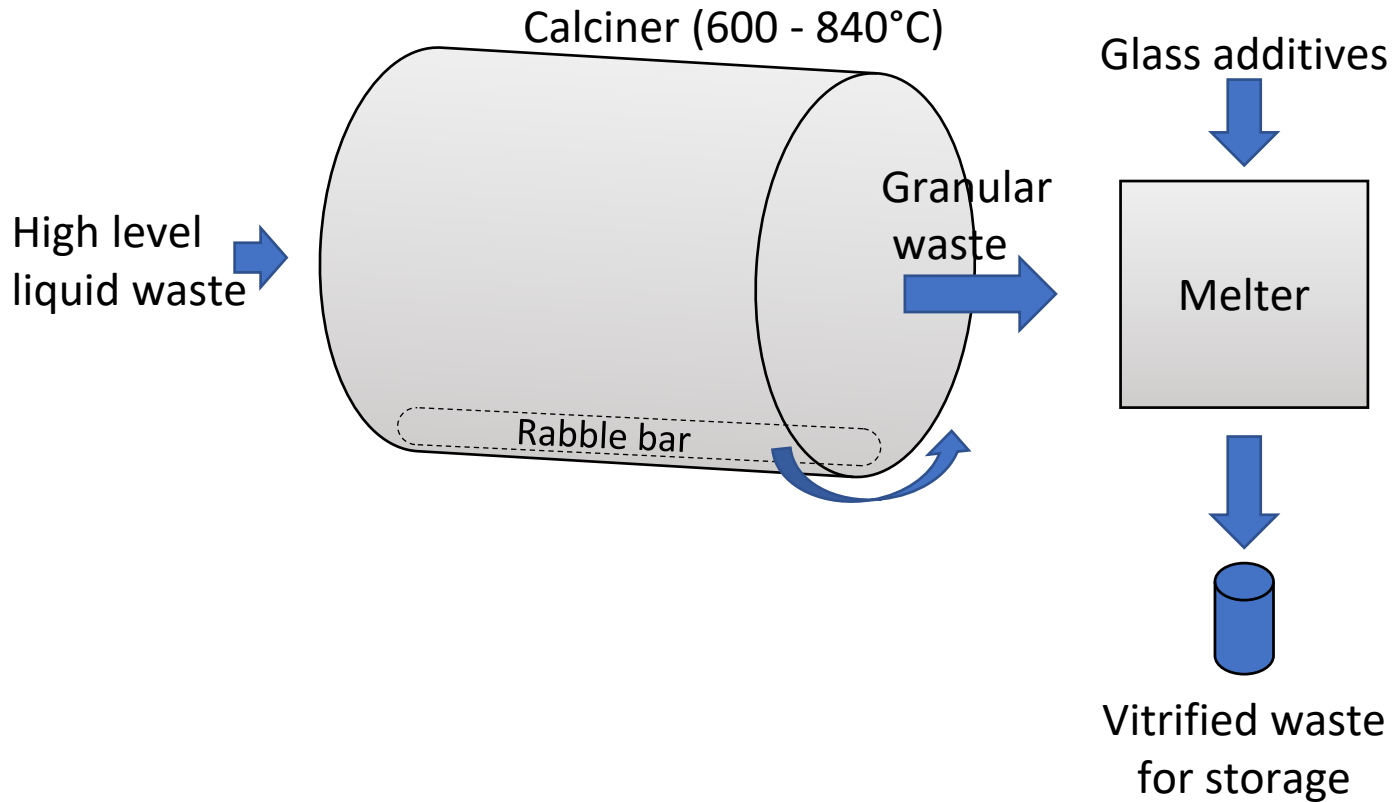
Business objectives

- Where are the maintenance issues?
- How much is an issue costing?
- What is the potential benefit?



Data

- Initial evaluation (quantity, quality, bias...)
- Does the available data constrain your solution?
- Have you missed potential sources of data?



Solve

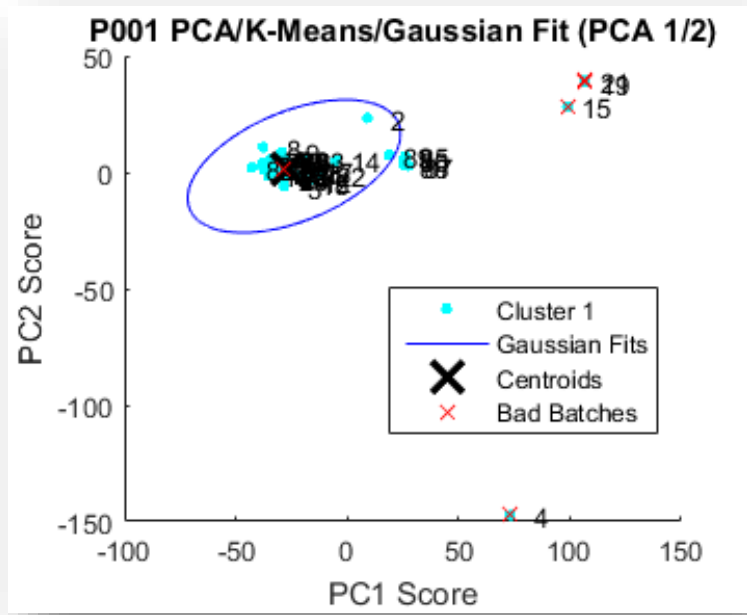
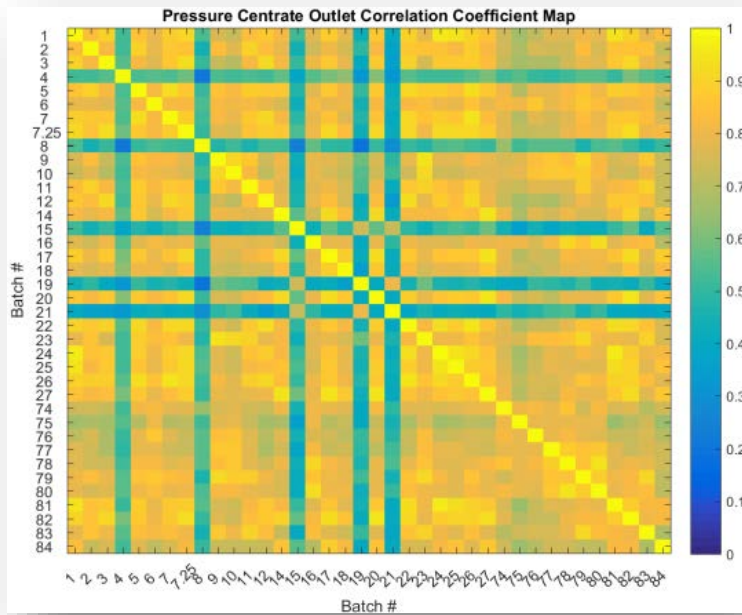
- Evaluate multiple approaches
- Understand trade-offs
- Be prepared to stop



Unpredictable production failures causing loss of high value product and serious manufacturing delays

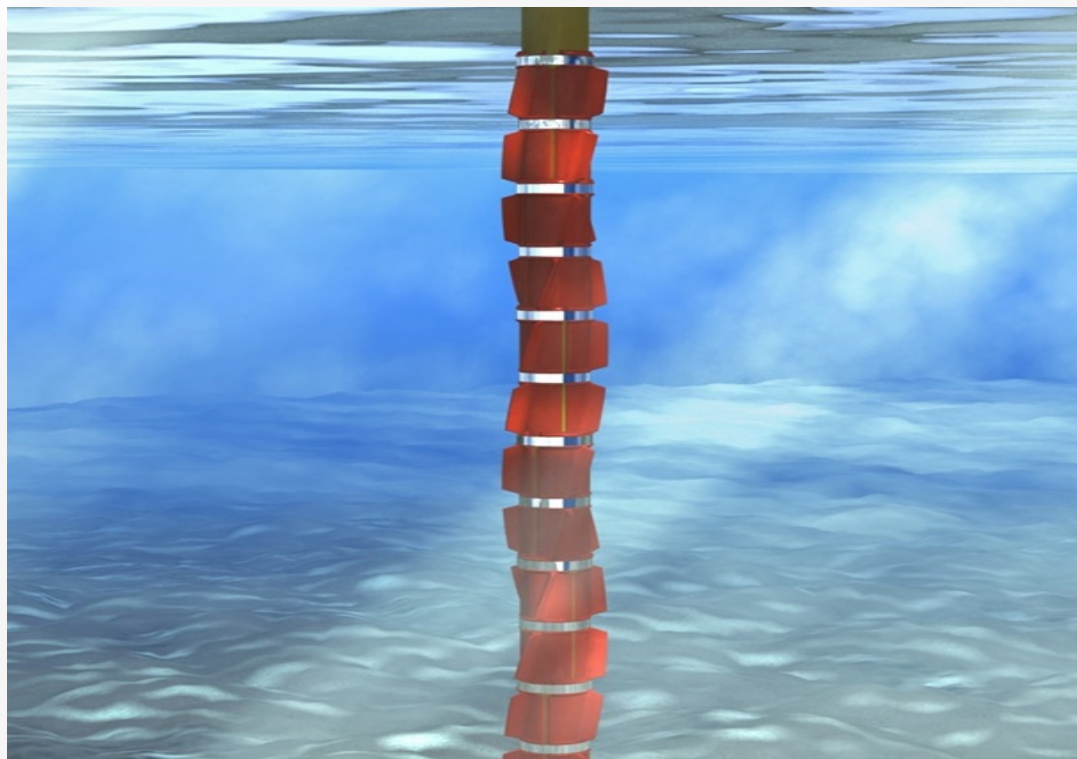
Up to \$1 million losses incurred per failed batch

Very limited data available



Deploy

- Is your solution ready?
- Deploy now and refine in-service?
- Ensure solutions are used and remain viable



Conclusion

Data science without control is a recipe for disaster

Need a flexible data science framework to maximise progress under uncertainty

Cover the full lifecycle from business need to deployment