

# DUDSS x NEWTON WORKSHOP

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## WHO ARE WE?

● WE ARE AN **OPERATIONAL CONSULTANCY**



● WE WERE FOUNDED IN **2001** BY **THREE ENGINEERS**



● **WE'VE GROWN 25% YoY** IN THE PAST 20 YEARS AND EMPLOY MORE THAN **600 FULL-TIME STAFF**



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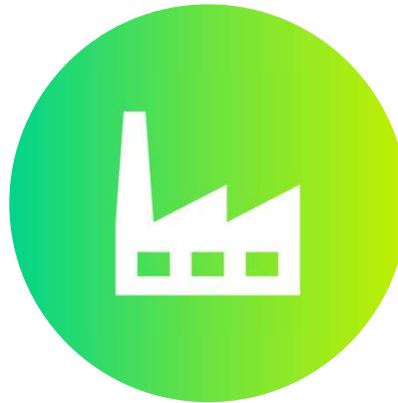
## WHO ARE WE?

- We work across three key clusters: consumer, public and defence & infrastructure
- The types of projects we work on vary across these clusters

**DEFENCE AND  
INFRASTRUCTURE**  
Air, Land, & Sea



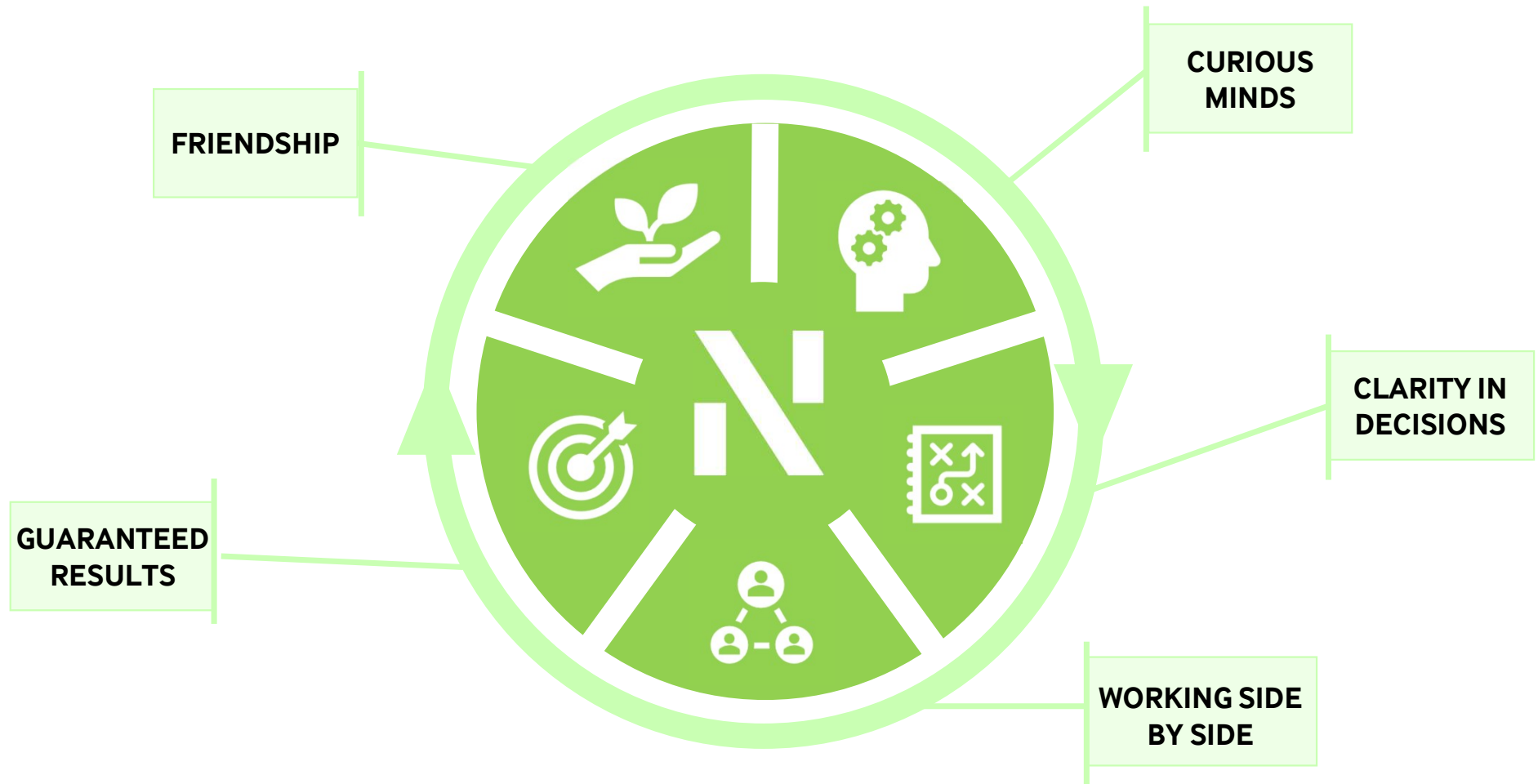
**CONSUMER**  
Grocery, FMCG,  
Manufacturing, & FS



**PUBLIC**  
Healthcare, Adult  
Social Care, &  
Children's Services



## WHO ARE WE?



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## WE'RE HIRING!



### **Operations Consultant**

£45-50k package + variable joining bonus  
UK field-based

*Working alongside a variety of clients to design and implement programmes that deliver real, sustainable change. You'll be working on site, from the shop floor to the boardroom and everywhere in between.*



### **Digital Consultant**

£45-50k package + variable joining bonus  
UK field-based

*Working on the same teams as the operations consultants but providing specialist digital support within the team. This could range from using data science methods to better understand a situation to building software tools alongside the client.*

- Applications open now!
- Any degree accepted (we test for required skills during the application process)
- You can apply at any point in your degree programme and, if successful, defer your start date until after you graduate
- Flexible start dates from October 2022
- VISA sponsorship if needed
- Joining bonus straight after signing contract

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## WORKSHOP ACTIVITY

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## CONTEXT – WHAT IS THIS ACTIVITY BASED ON?

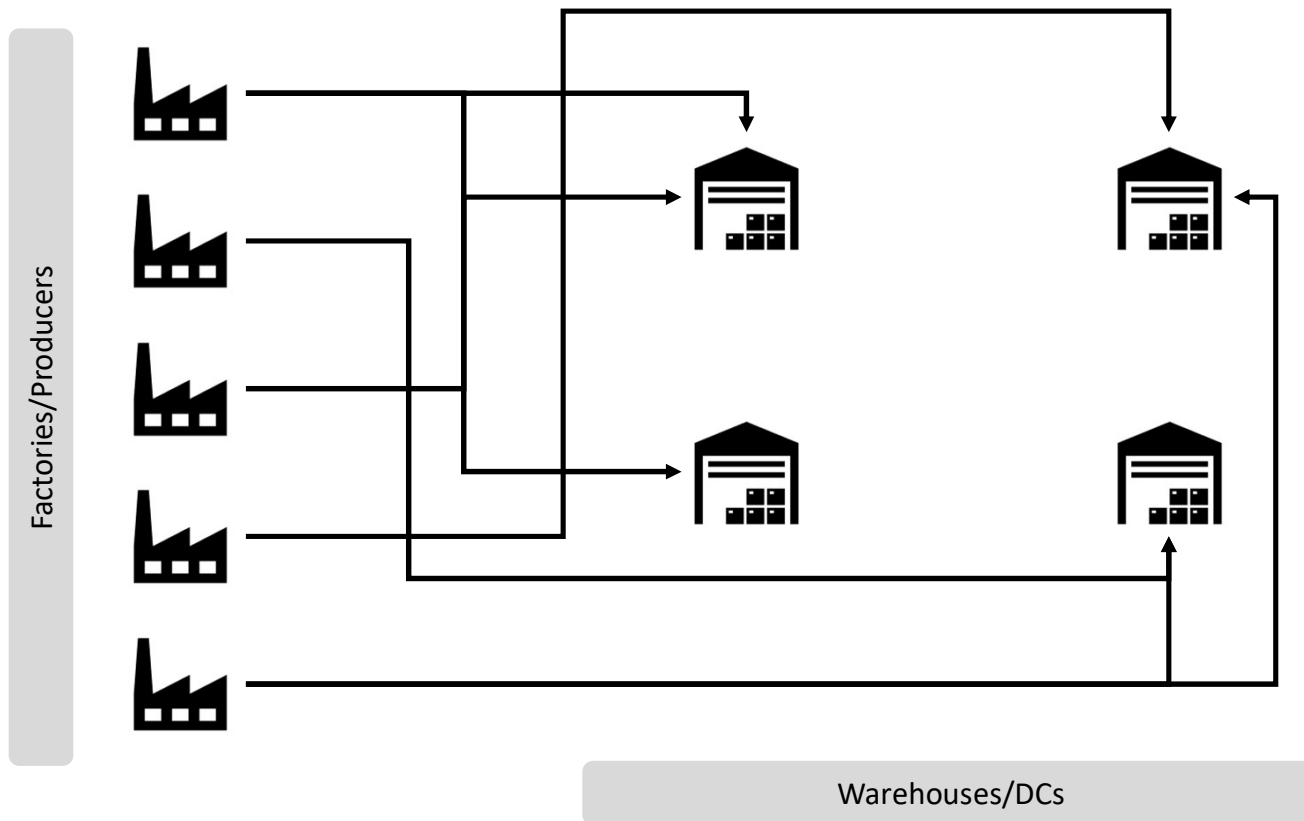
- Directly based upon a REAL piece of assessment work that we did just a couple of months ago with a national supermarket client
  - Simulating and optimising transport from a distribution centre to stores
  - Finding a potential reduction in transport spend
- We can't give you their actual data, but we have generated our dataset to mirror the structure very closely

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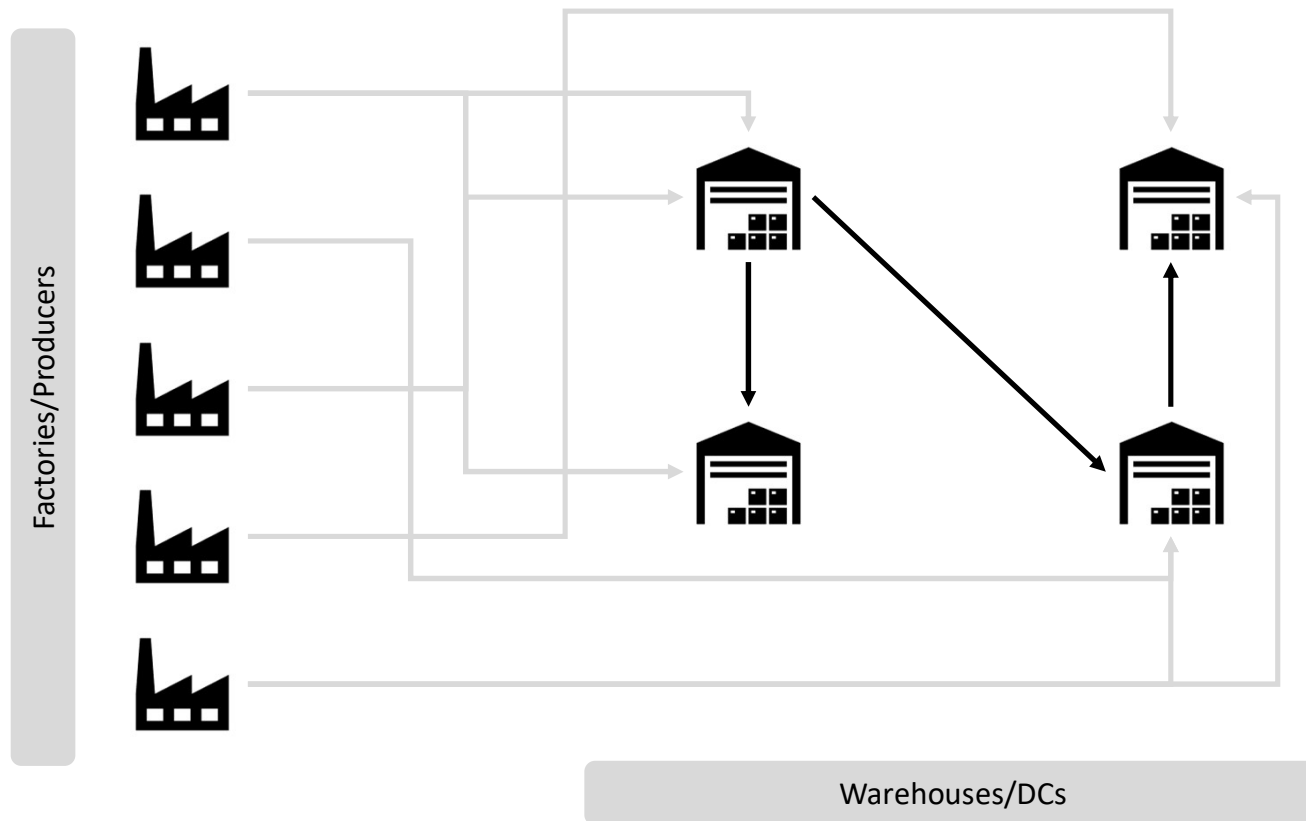
## CONTEXT – WHAT DOES A SUPERMARKET NETWORK LOOK LIKE?



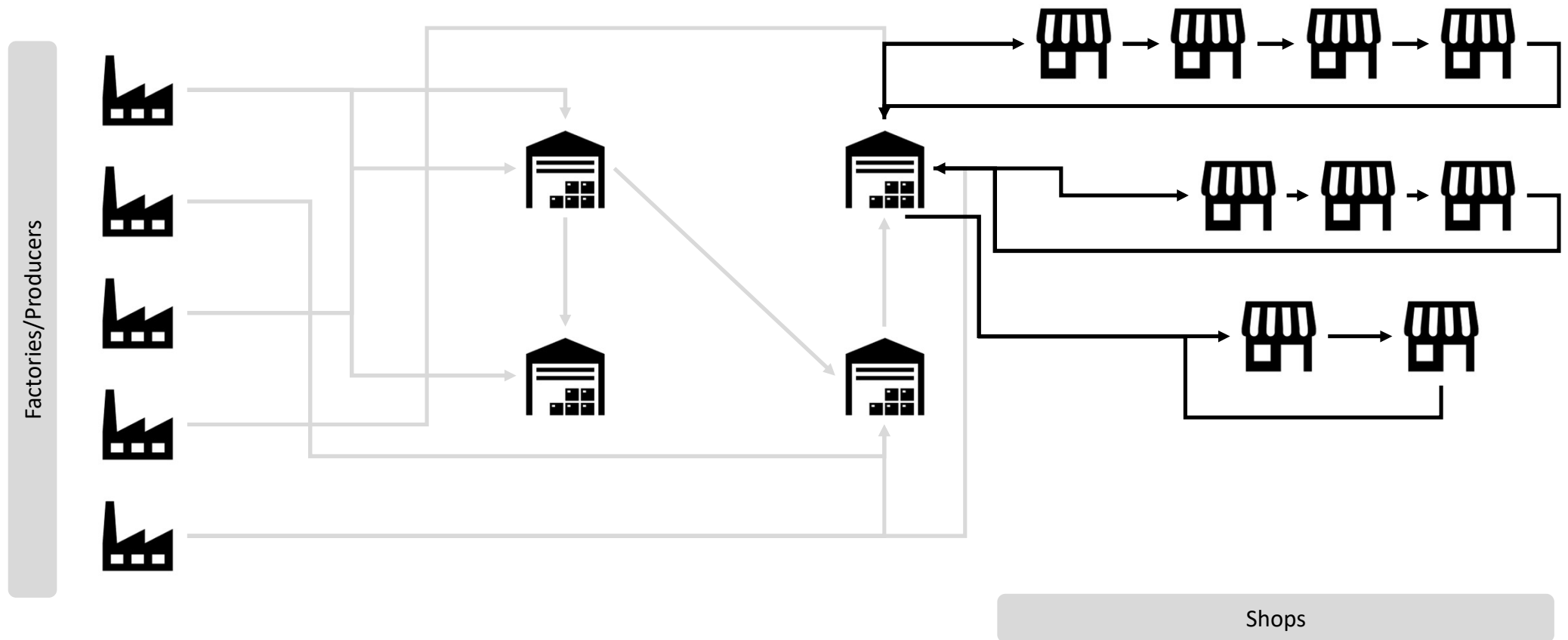
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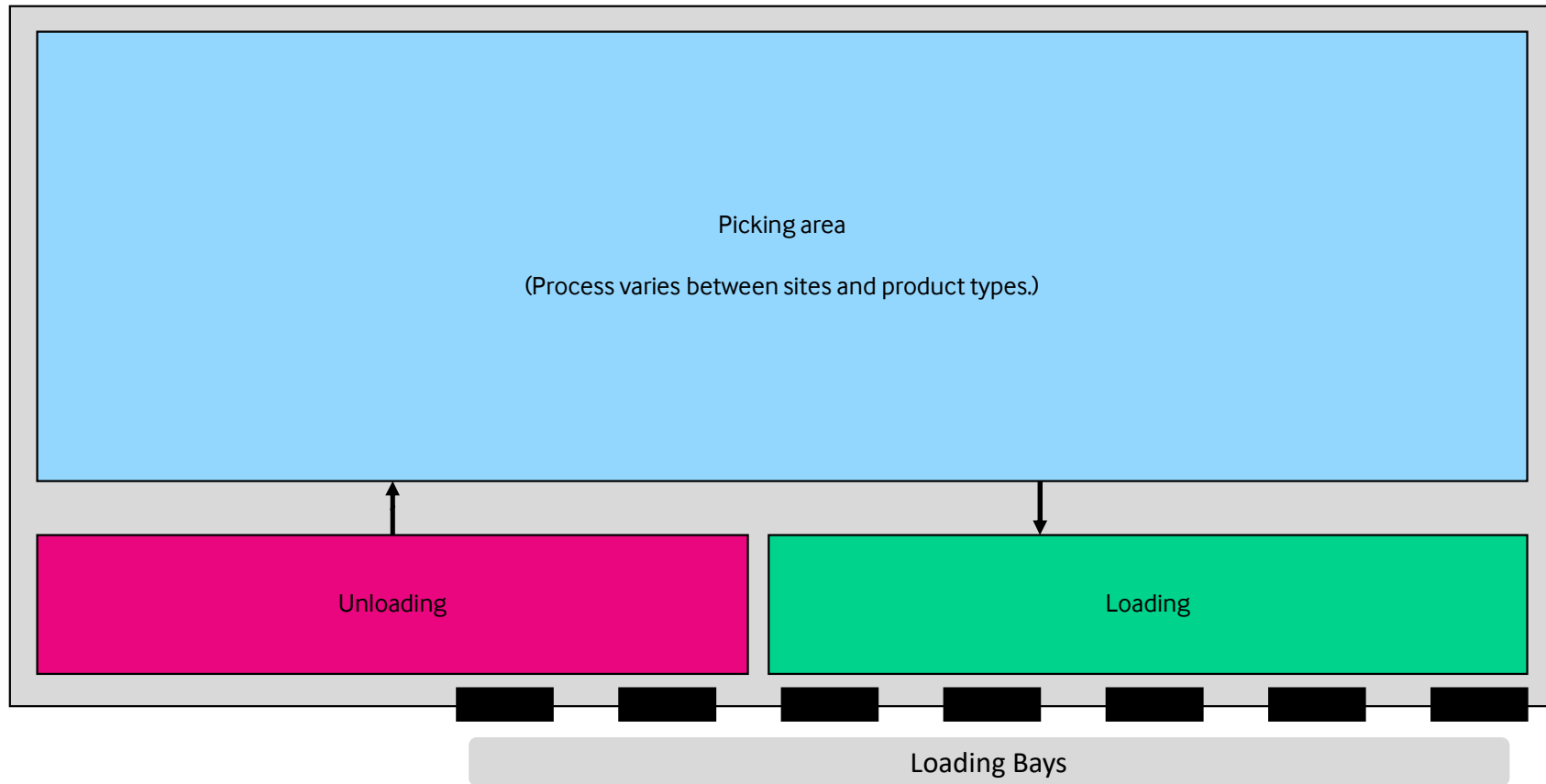
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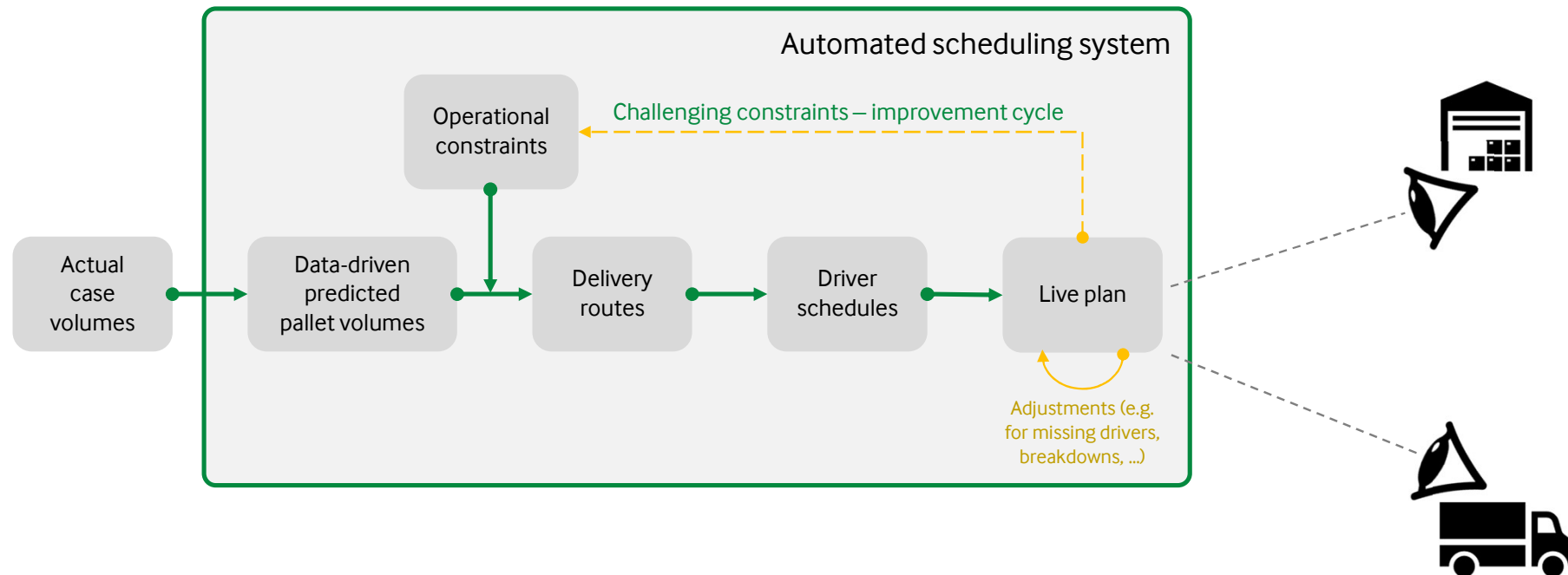
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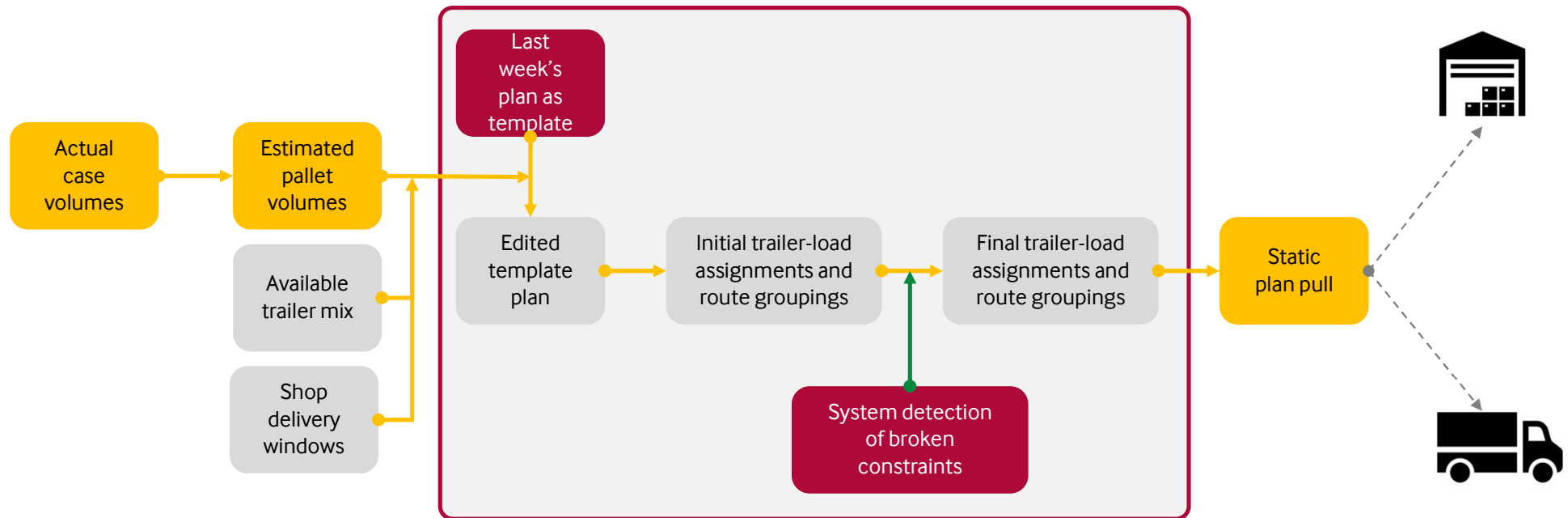


## CONTEXT – WHAT WOULD A GOOD DELIVERY SCHEDULING SYSTEM LOOK LIKE?



- Indicates manual process
- Indicates automated process

## CONTEXT – WHAT IS THE CLIENT ACTUALLY DOING?

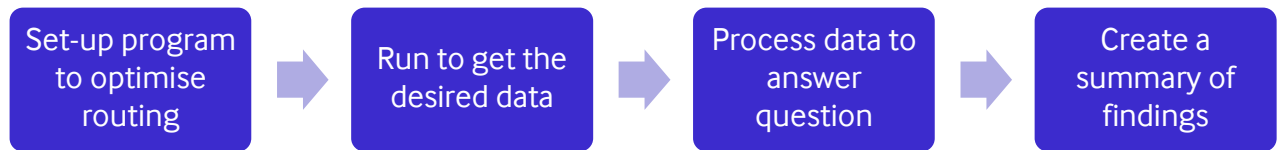


- ABC Indicates Google Sheet
- Indicates manual process
- Indicates automated process



**HOW MUCH COULD COMPUTER-BASED  
OPTIMISATION OF TRANSPORT BE  
WORTH TO THE CLIENT?**

**Q:**  
**HOW MUCH COULD COMPUTER-BASED  
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**Q:**  
**HOW MUCH COULD COMPUTER-BASED  
OPTIMISATION OF TRANSPORT BE  
WORTH TO THE CLIENT?**

Set-up program  
to optimise  
routing



Run to get the  
desired data



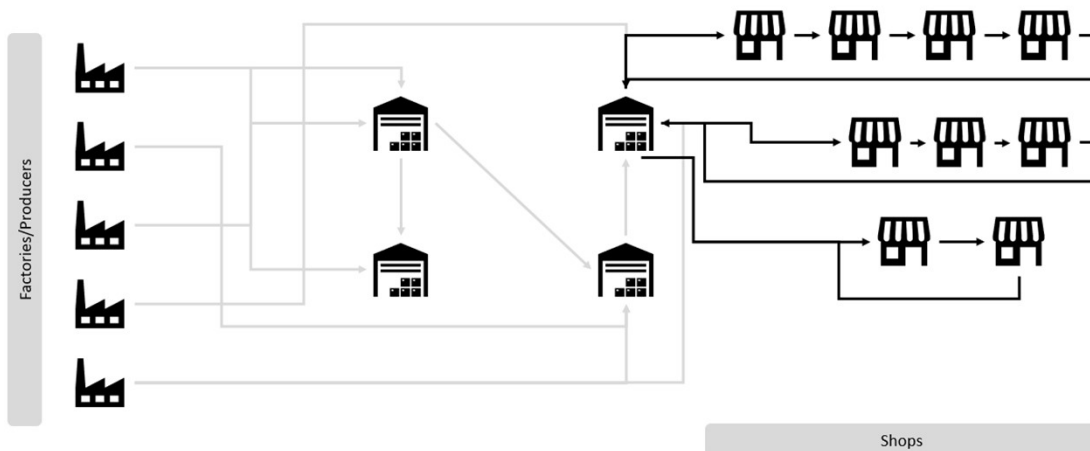
Process data to  
answer  
question



Create a  
summary of  
findings

## WHAT YOU HAVE

- 'StoreDemands.xlsx' – a table listing how many pallets needed to be delivered to each store over the data period from one depot
- 'TravelTimeMatrix.xlsx' – a matrix of travel times between the depot and all stores
- 'PastShiftUsage.xlsx' – a table listing how many shifts were actually used for each day over the data period
- 'OperationalDetails.pdf' – a document detailing operational constraints and some other information
- 'ExampleProgram.py' – template code for solving a vehicle routing problem with the Google OR Tools package



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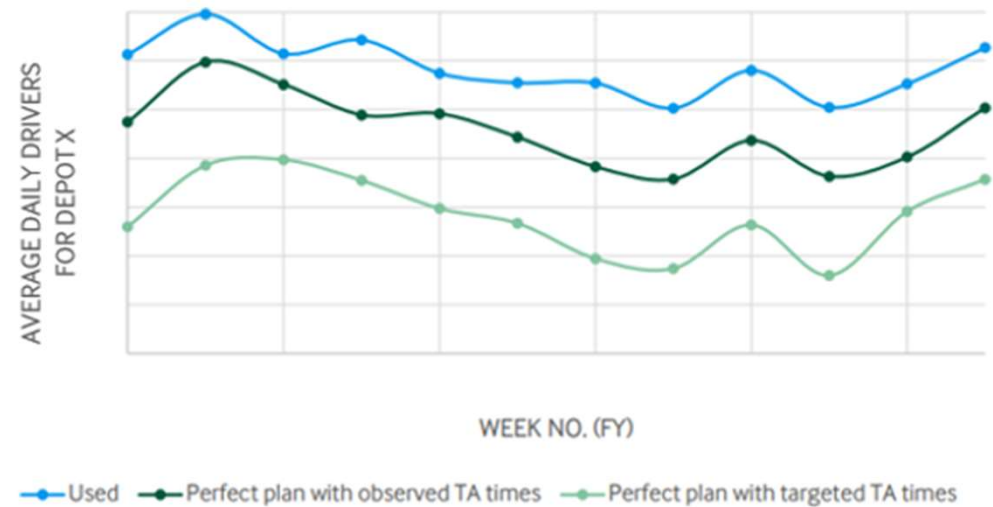
## RESULTS OF THIS WORK

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## WHAT WAS THE OUTCOME OF OUR ACTUAL WORK?

- **~£5m** annual savings from computational optimisation of transport across the country
  - **~£20m** annual savings across all transport improvement opportunities, including through constraint challenges identified through simulation
  - **~£60m** total annual savings identified from all opportunities identified and analysed during our 6-week depot assessment
- 
- ... starting an implementation programme soon!



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## WE ARE NEWTON

### APPLY & FIND OUT MORE

To learn more about Newton and the grad roles we have on offer, use this QR code to head directly to our website!

If you have questions about Newton or applying, please email [graduates@newtoneurope.com](mailto:graduates@newtoneurope.com)



<https://workatnewton.com>

### Feedback form:



[https://forms.office.com/Pages/ResponsePage.aspx?id=ADjKoemSQkmh4B8UmIss4Q7FUZLW\\_0xPrcbguu-Z\\_9VUOEU2UFBKUVFJQzlwUjJBNOk3S0IFVVZDTi4u](https://forms.office.com/Pages/ResponsePage.aspx?id=ADjKoemSQkmh4B8UmIss4Q7FUZLW_0xPrcbguu-Z_9VUOEU2UFBKUVFJQzlwUjJBNOk3S0IFVVZDTi4u)

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**NEWTON**