



# Session 1: Local ports : decision making tools developed within the FLIP project

Flow Modelling : presentation of the projects undertaken by ISEL :  
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Opportunities for Growth in Small & Medium Sized Ports in Europe  
Quelles opportunités de croissance pour les Brussels ports locaux en Europe

Brussels– Wednesday 27<sup>th</sup> May 2015





Le projet FLIP

- Accroître la coopération entre économique
- Accroître les relations transfrontalières, l'innovation et la diversification
- Optimiser les ressources humaines et énergétiques des ports



# MODELING AND SIMULATION

COMPTOIR DE LA LOGISTIQUE

27/05/2015



# ISEL, a school unique in France

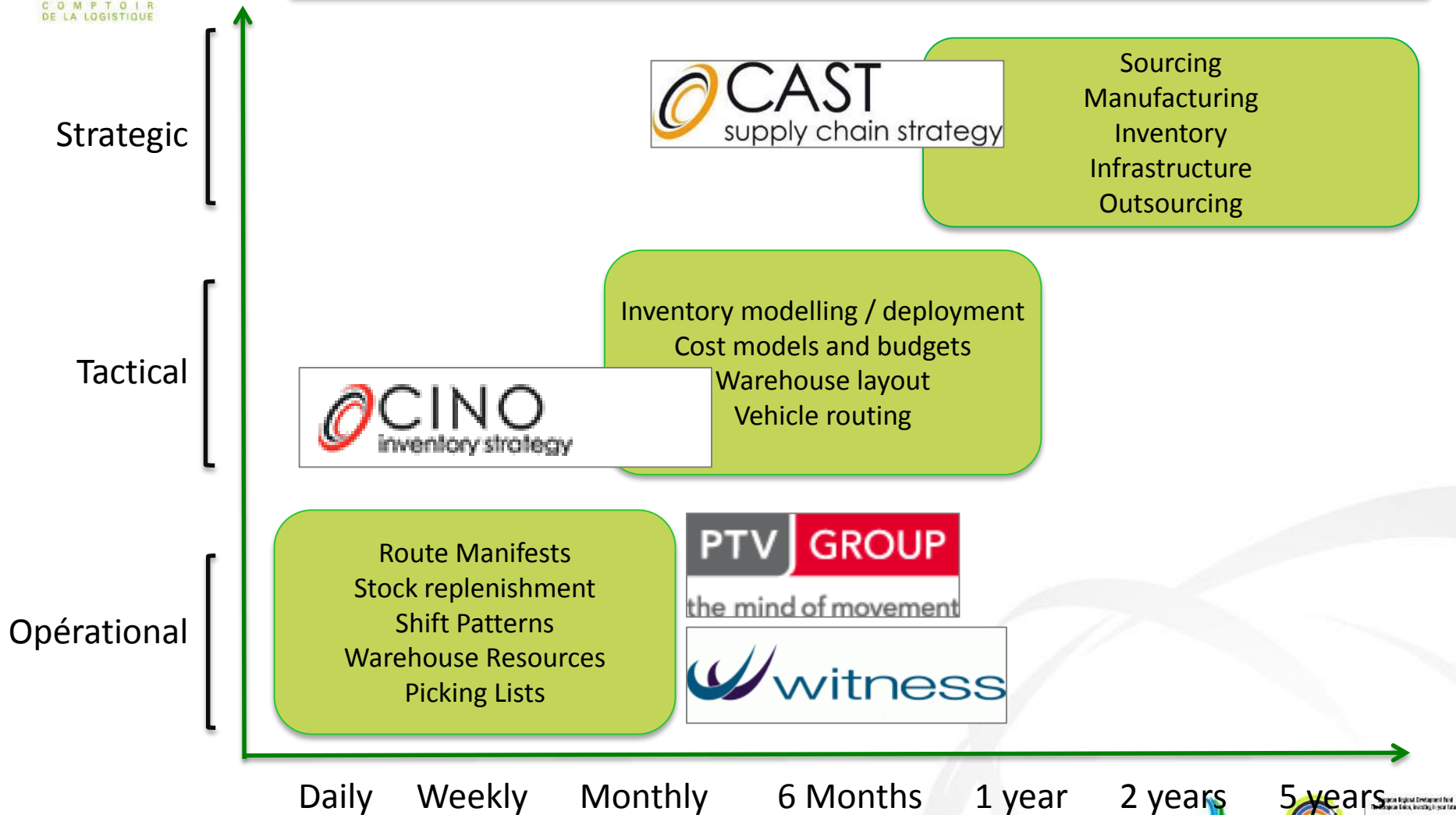
- ✓ **ISEL, school of logistics** is the only public engineering institute in France in the field of logistics
  
- ✓ **Some figures:**
  - School founded in 1994
  - 498 graduated engineers
  - 187 students (2014/2015)
  - 44% women
  - Around 50 new graduates each year
  - 95% graduates under contract in less than 6 months
  - ISEL 800 program: double the number of students by the coming years



- ✓ Comptoir de la logistique:
  - Project engineering
  - 10 colleagues
  - 3 main competences:
    - Modeling/simulation
    - Supply Chain trade skills diagnosis (Audit)
    - Major projects and cooperation
  
- ✓ Construction of decision making tools
  
- ✓ We design both strategic (network optimization) and operational (process/flow optimization) models



# Modeling and simulation – Logistics issues



# Field of activities

## ✓ Who is concerned by our activities:

- Industrial companies
- Ordering institutions
- Port activities

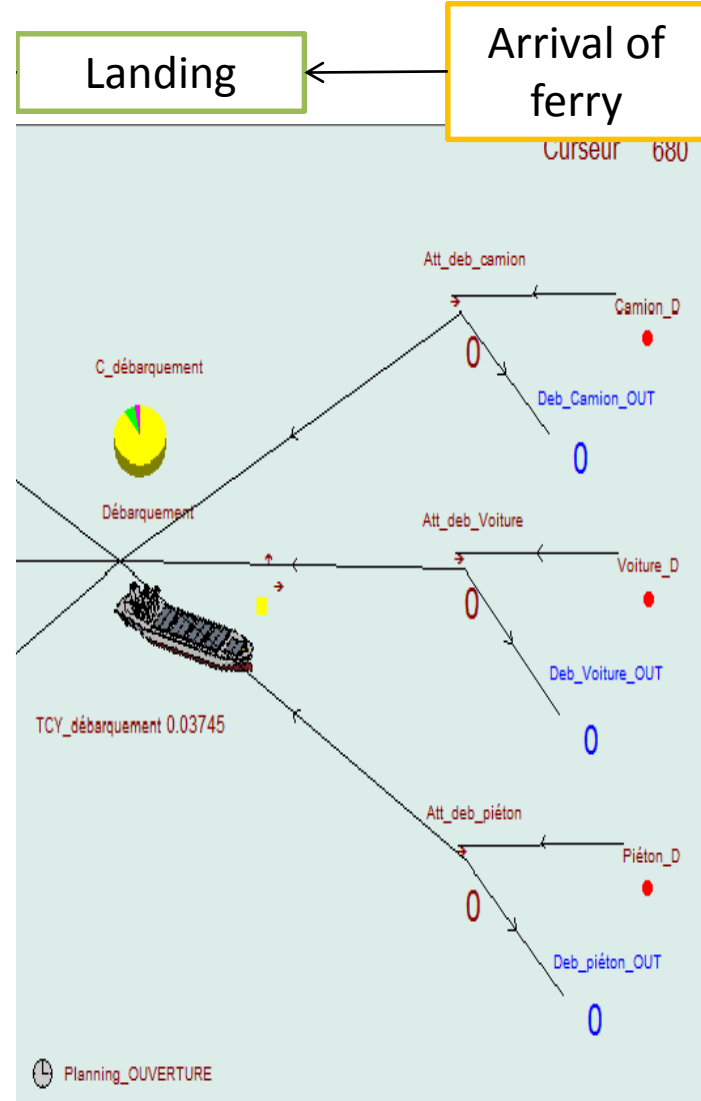
## ✓ Our partners



- ✓ Objective of the FLIP project
  - To promote a sustainable cooperation between small and medium sizes ports in the channel area
  - 3 ports (Newhaven – Le Tréport – Boulogne-sur-mer)
  - Comptoir's studies : phase 3 /action 2
- ✓ Objective of our study for Newhaven
  - To develop a decision-making tool in order to improve the support of the ferry passengers
- ✓ What kind of issue?
  - Optimization of the use of the space on the terminal
  - Improving the passengers flow rate
  - Dimensioning of terminal resources



# NEWHAVEN – Base case



- ✓ Scenario 1
  - Opening of a third check-out point for cars
  
- ✓ Scenario 2
  - Cyclists are integrated as processing foot passengers
  
- ✓ Scenario 3
  - Variation of the number of cyclists to a maximum
  
- ✓ Scenario 4
  - Authorization to allow boarding when the check-out operations are not finished

		Base case	SC1-70 +1 check-out	SC4 boarding/landing	SC5 combinaison SC1-70/SC4
Boarding	Cars	0	3.24 <b>(-13%)</b>	4.44 <b>(-17%)</b>	<b>5.92</b> <b>(-23%)</b>
	Trucks	0	1.67 <b>(-5%)</b>	2.22 <b>(-7%)</b>	<b>2.83</b> <b>(-9%)</b>
	Foot passengers	0	3.08 <b>(-10%)</b>	3.99 <b>(-13%)</b>	<b>5.35</b> <b>(-18%)</b>
Landing	Cars	0	2.72 <b>(-16%)</b>	0	<b>2.72</b> <b>(-16%)</b>
	Trucks	0	0	0	<b>0</b>
	Foot passengers	0	0	0	<b>0</b>

- ✓ Average benefit SC4 > Average benefit SC1-70
- ✓ SC5 : accumulation of advantages of SC1-70 and SC4

- ✓ Recommendation 1 : boarding is authorized during landing
  - If : less than 50 cars left to disembark
  - Boarding time of cars : -17%
  
- ✓ Recommendation 2 : opening of the third check-out for cars
  - If : more than 70 cars to disembark
  - Boarding time of cars : -23%
  - Landing time of cars : -16%

# Thank you for your attention

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