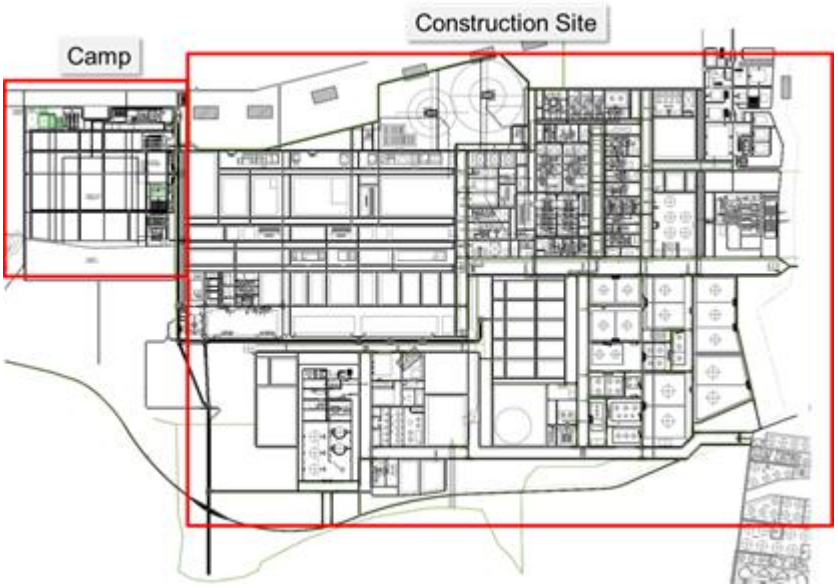
CASE STUDY

Dynamic simulation of the 60000 workers public transport system on the petrochemicals site in Johor (Malaisia)

PROJECT DETAILS AND BACKGROUND

The Petronas company have built a petrochemical complex near the sea in Johor.
As this area is long as 5 km, 60000 workers are needed to make it works. They live in a camp, closed to the area.
In order to bring them to the construction area, a dedicated bus lane has been setup.



ANALYSIS AND METHODOLOGY

During this mission, CeRyX Trafic System assisted Technip company (which was in charge of the construction work) and participated to setup the public transport system:

- Sizing of the bus lane service
- Crossroads & docks functioning
- Propositions about the rolling stock
- Dynamic simulation during rush hours, with the rest of the trafic

BUS SYSTEM REALISATION

CeRyX Trafic System wrote a technical note with all the informations required to size the number of bus needed.

In order to estimate the average time travel, metrics are determined, like exchanging times, bus boarding station functioning and 40 itineraries analyses…

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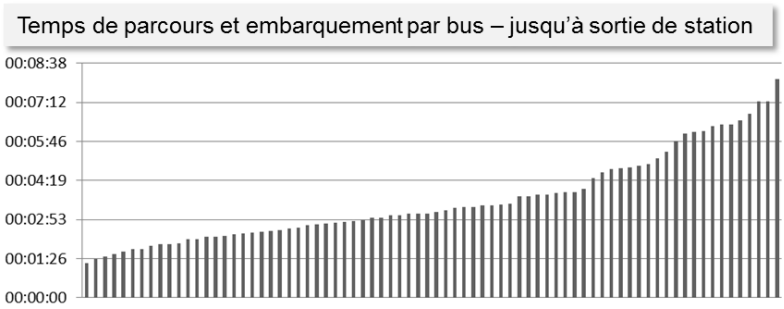
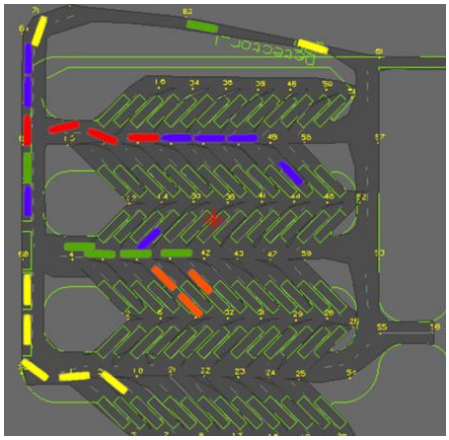
CeRyX Trafic System collaborates with Alcyone architecture and Technip, to define the ground plane and make the bus system sustainable.

CONTROL THANKS TO THE DYNAMIC SIMULATION – ORIGINAL GROUND PLANE

A first dynamic simulation shows that the bus system was not overall effective, especially at the first bus departure. There was also traffic jam on the bus roads to access the construction area.





CONTROL THANKS TO THE DYNAMIC SIMULATION – FINAL GROUND PLANE

All the study team worked on the organization of the bus station, bus traffic, and decided to split buses in 6 stations instead of 4 stations initially planned.
CeRyX Trafic System tested the system in all the area, one more time, with the dynamic simulation, with something like 300 buses circulating and 800 personal cars.
And finally, the travel times validated the good system functioning.