iCargo Innovations

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Dortmund

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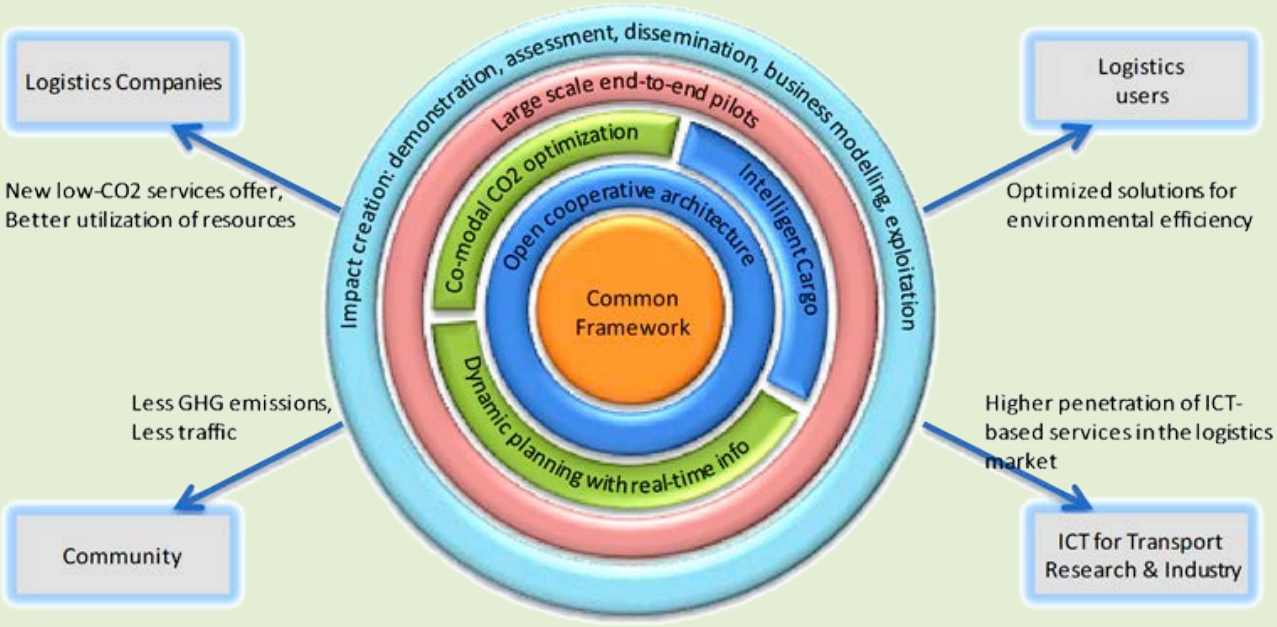
The iCargo integrated project

Objective: To build an open affordable information architecture that allows real world objects, existing systems, and new applications to efficiently co-operate, enabling more cost effective and lower-CO_2 logistic processes.



Consortium:

iCargo innovations

- **Collaborative planning**, for pooling and sharing resources across the logistic chain.
- **Logistic chain composition** based on services, for integrating the different available transport and logistic services.
- **Re-planning of logistic chains by (or on behalf of) the client**, in case of goals changes or events happen during the execution time.
- **Optimization of the use of resources** of the logistic chain, allowing the Logistic Service Providers to be more situational aware and so to optimize the use of transport resources.
- **Monitoring the environmental footprint**, providing smart tools and shared methodologies for environmental data gathering and reporting.

iCargo functions

- **Logistic chain composition**
  - Collaborative planning support (information services support to the “physical internet”).
  - Open logistic network based on common definition of transport *and* logistic services.
  - Taking into account 3 dimensions: cost, effectiveness, emissions.
- **Logistic network awareness**
  - Monitoring infrastructure based on Intelligent Cargo, vehicle and infrastructure connectivity.
  - Re-planning triggered by automated monitoring and deviations.
  - Dynamic alignment of individual service providers plans.
- **Emissions monitoring**
  - Monitoring infrastructure includes collection of energy consumption data.
  - Real-time calculation of emissions at shipment level.

iCargo Pilot Cases

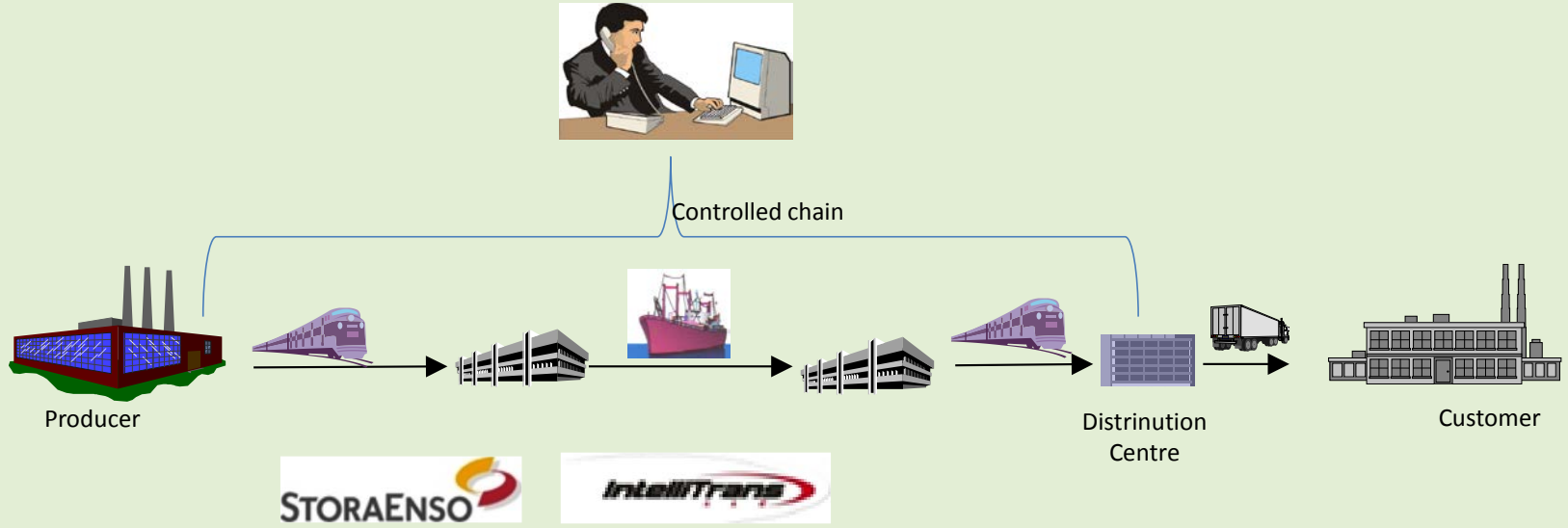
iCargo pilot cases:

1. *Sea-City-Air-Rail door-to-door service* (*SCAR*),
2. *Green Corridor between Sweden and the European Continent*,
3. *LSP-Shipper Cooperation on the Continent*,

Not to take too much of your time i will only talk about Pilot 2.

Pilot case: green corridor

- **Provision of co-modal door-to-door transport solutions** to manufactures, through integration of motorways of the sea with hinterland services offerings, rail and last-mile distribution.

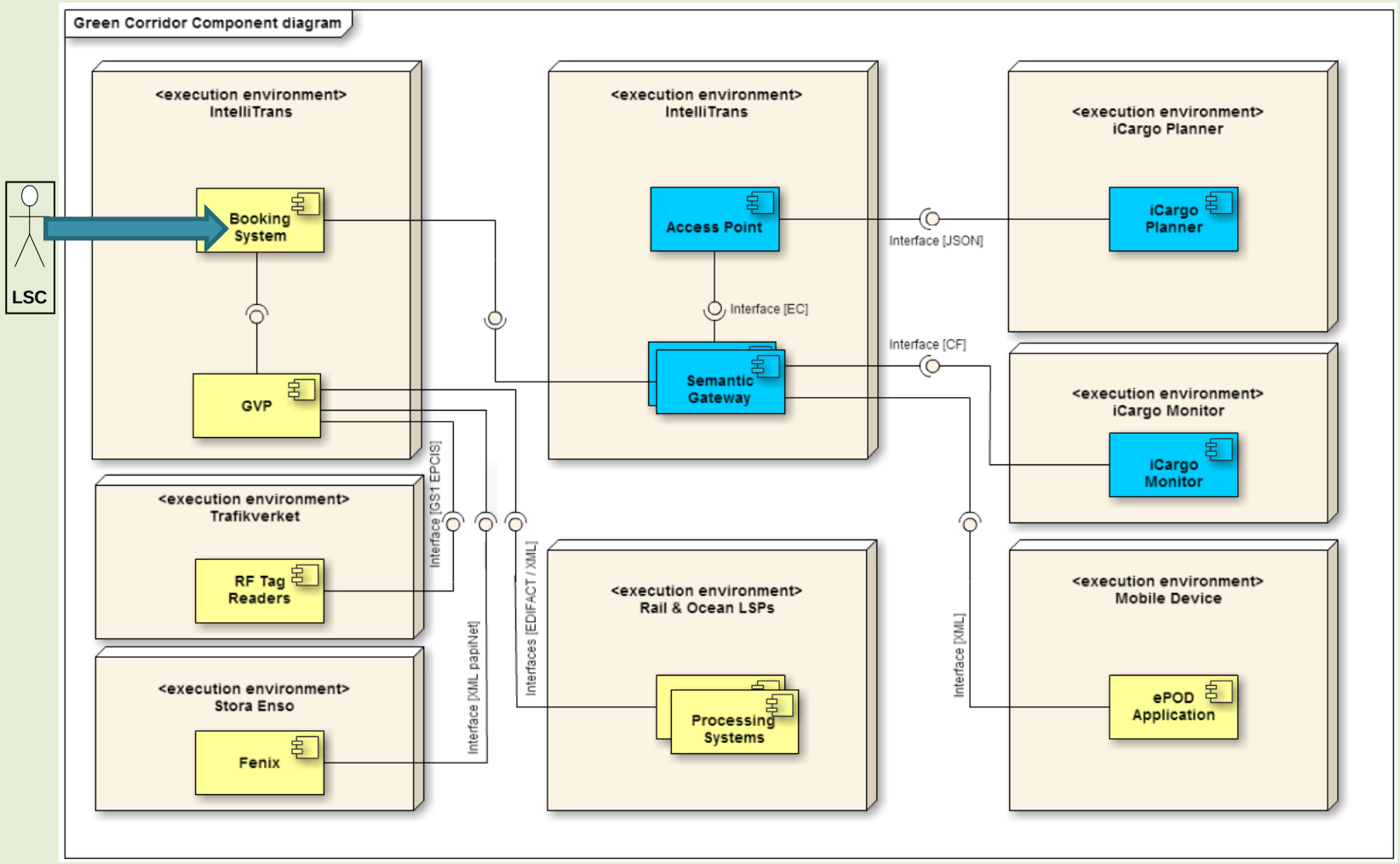


- The resulting combined services will have an **improved environmental profile**, by increasing the utilisation of the ships, and will improve the customer service through updated information and easier accessibility.

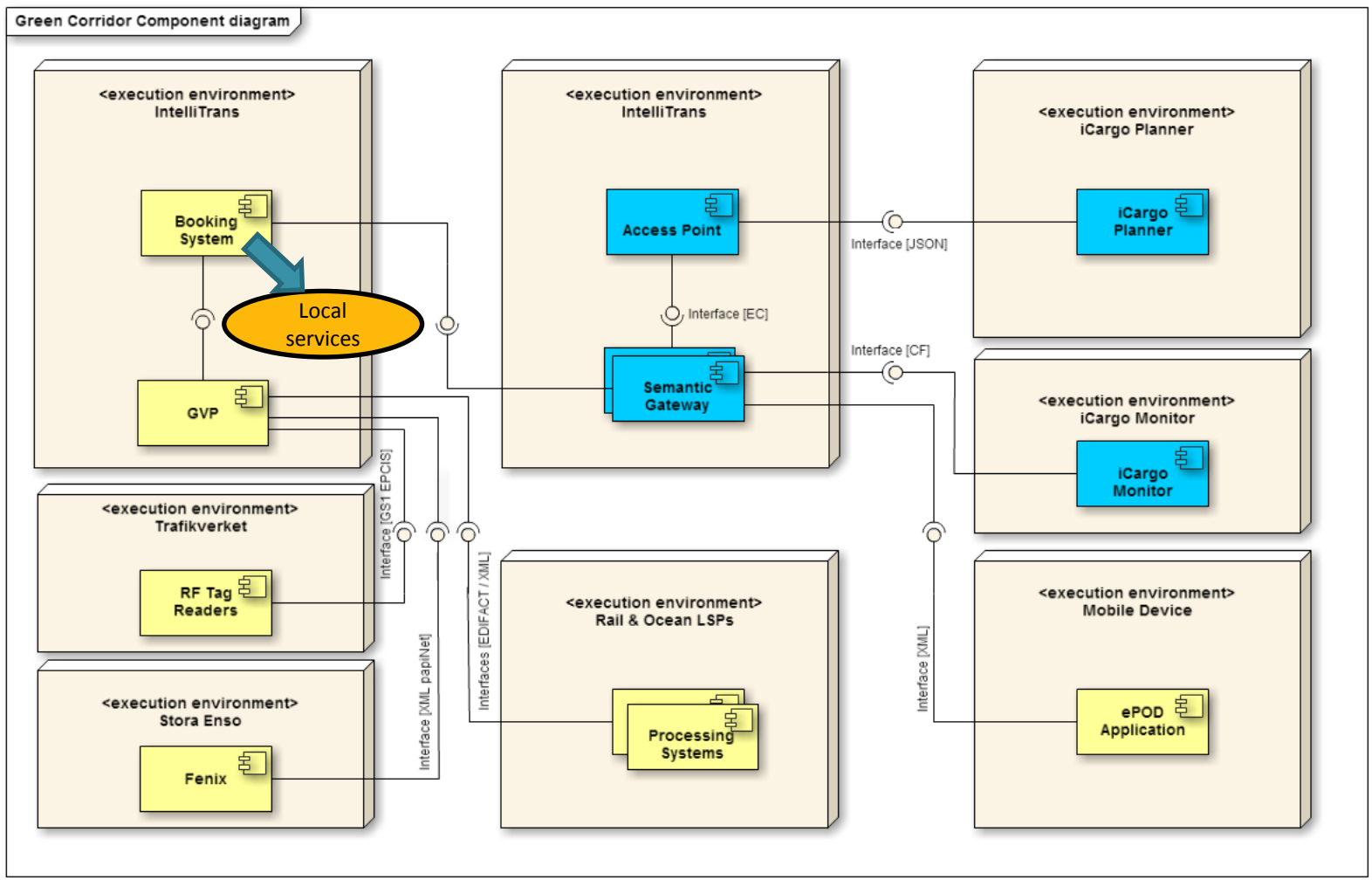
Business Innovation for Green Corridor Pilot

Pilot 2: Green Corridor					
iCargo Business Level Innovat.	**Collaborative planning**	**Logistic chain composition based on services**	**Re-planning of logistic chains**	**Real-time situational awareness**	**Monitoring the environmental footprint**
Advantage of iCargo for users		Open planning and booking system	Dynamic replanning of booked transportation based on execution data optimizing	Transport execution available from rail operator in Sweden	Environmental data is collected during planning and execution stages, providing full end-to-end emissions reporting
Users interaction with iCargo		LSC (Stora Enso), LSP (Green Cargo), LSP (Cobelfret)	LSC (Stora Enso), LSP (Green Cargo), LSP (Cobelfret)	LSC (Stora Enso), LSP (Trafikverket)	LSC (Stora Enso), LSP (Green Cargo), LSP (Cobelfret)

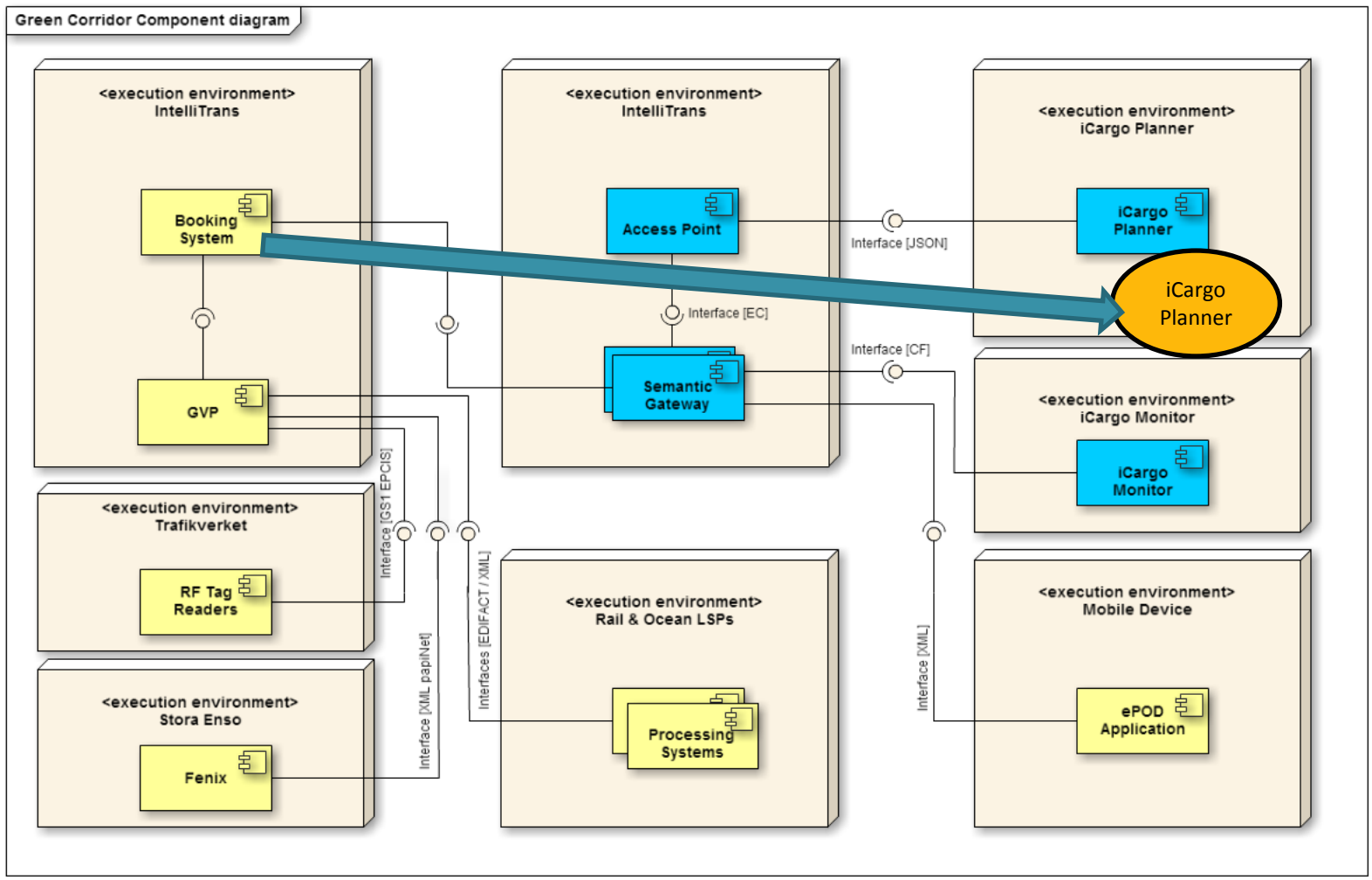
LSC searches for services



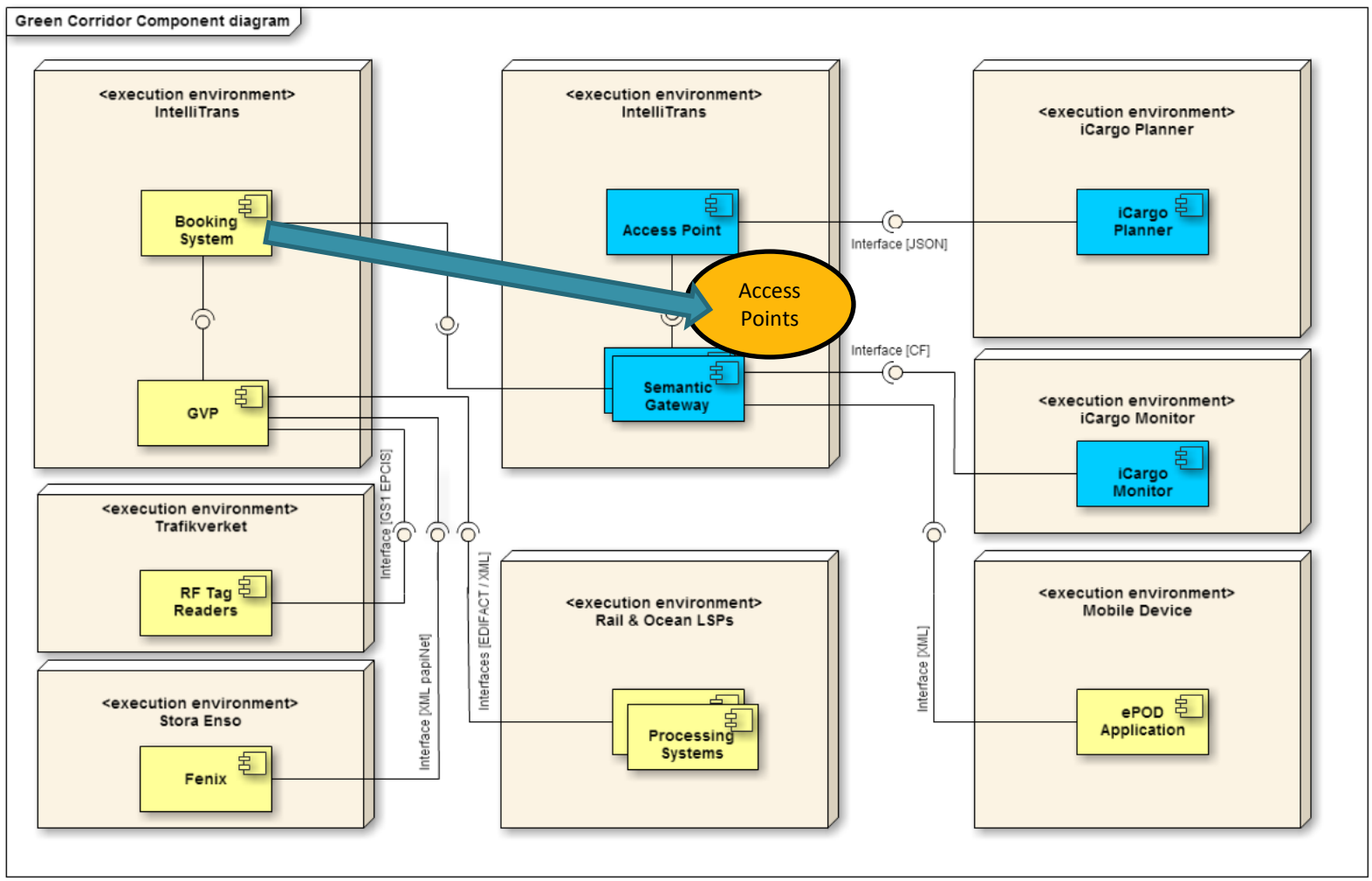
LSC search – locally stored services



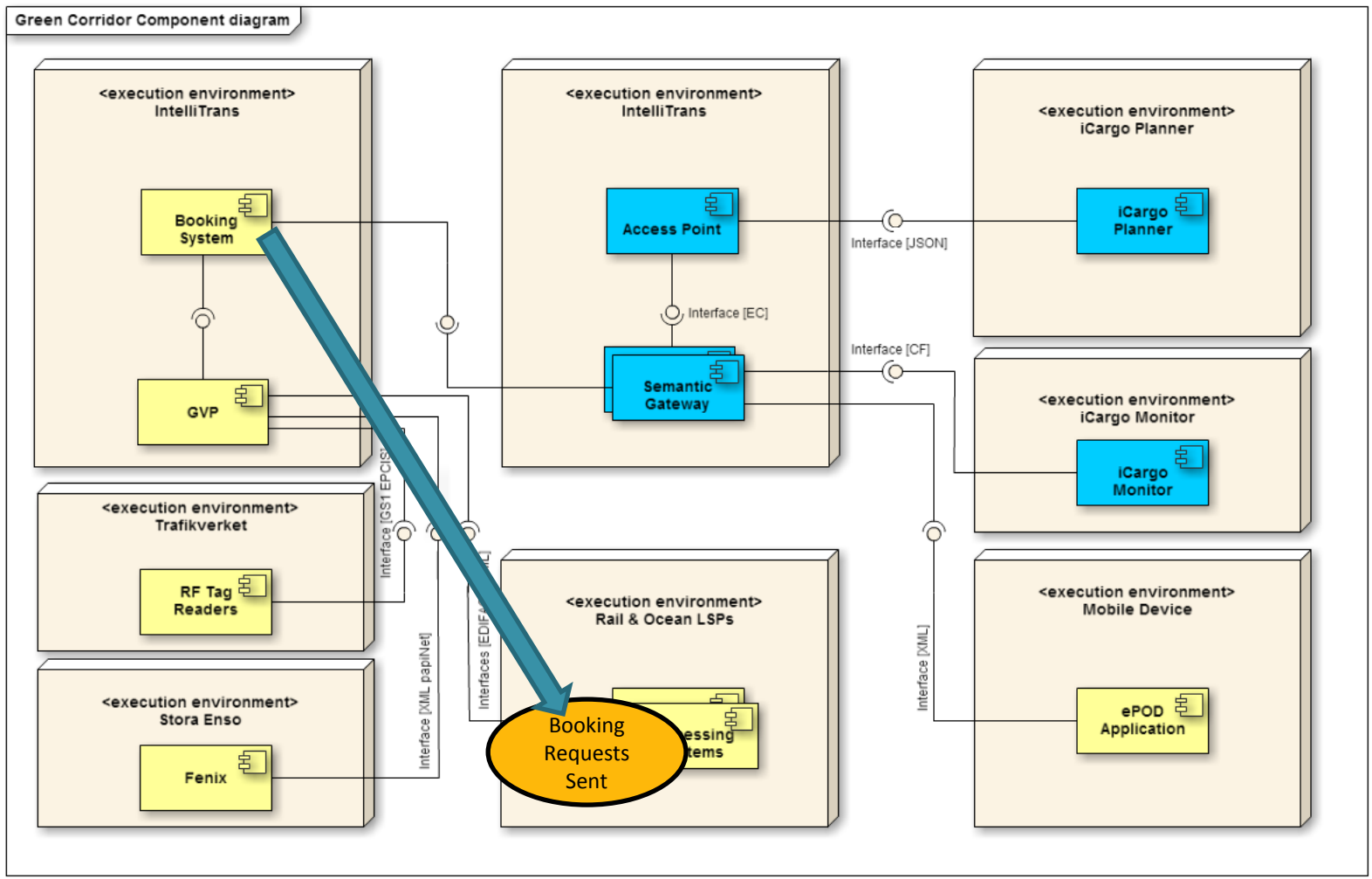
LSC search – iCargo Planner



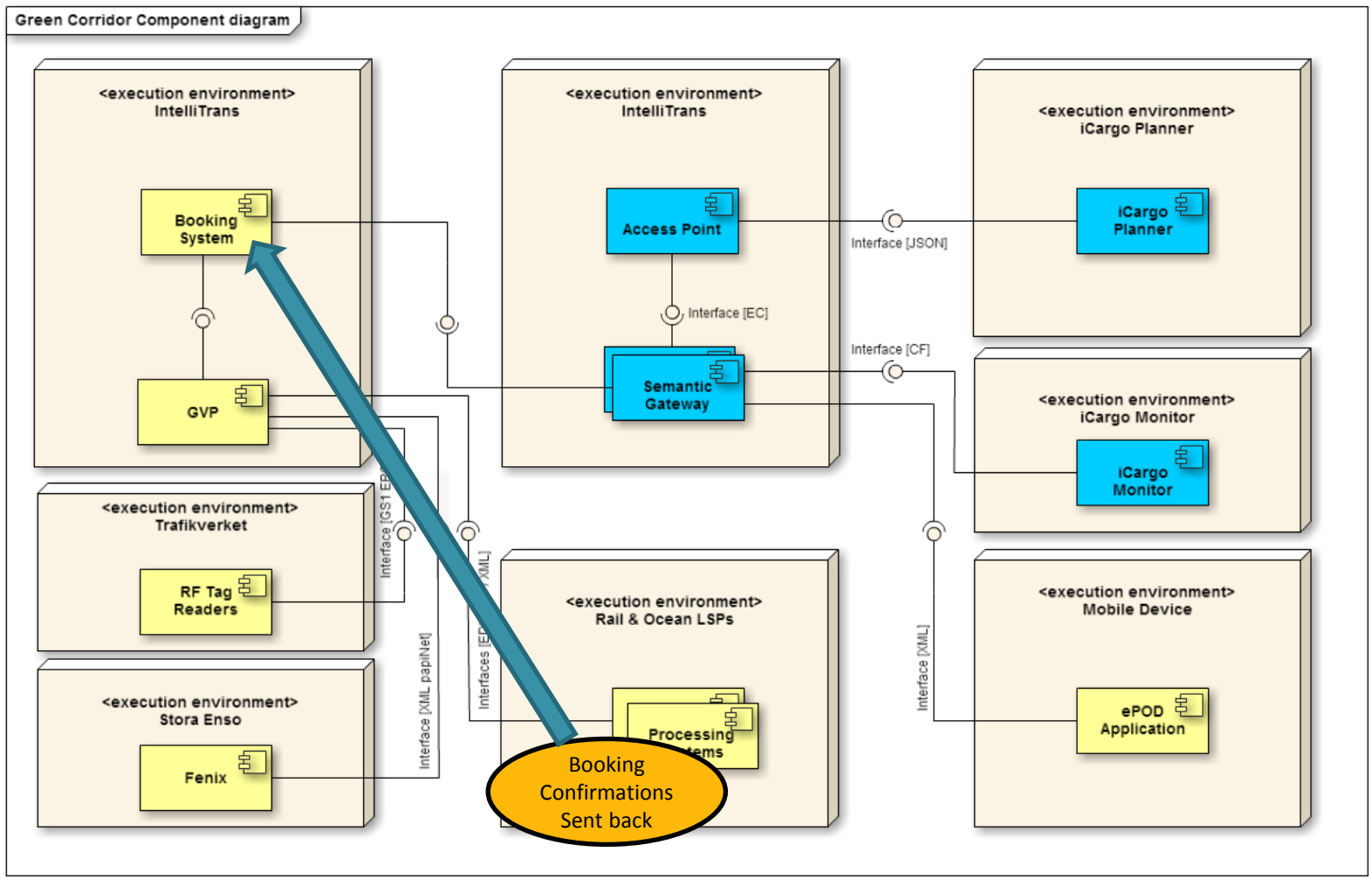
LSC search – Access Points



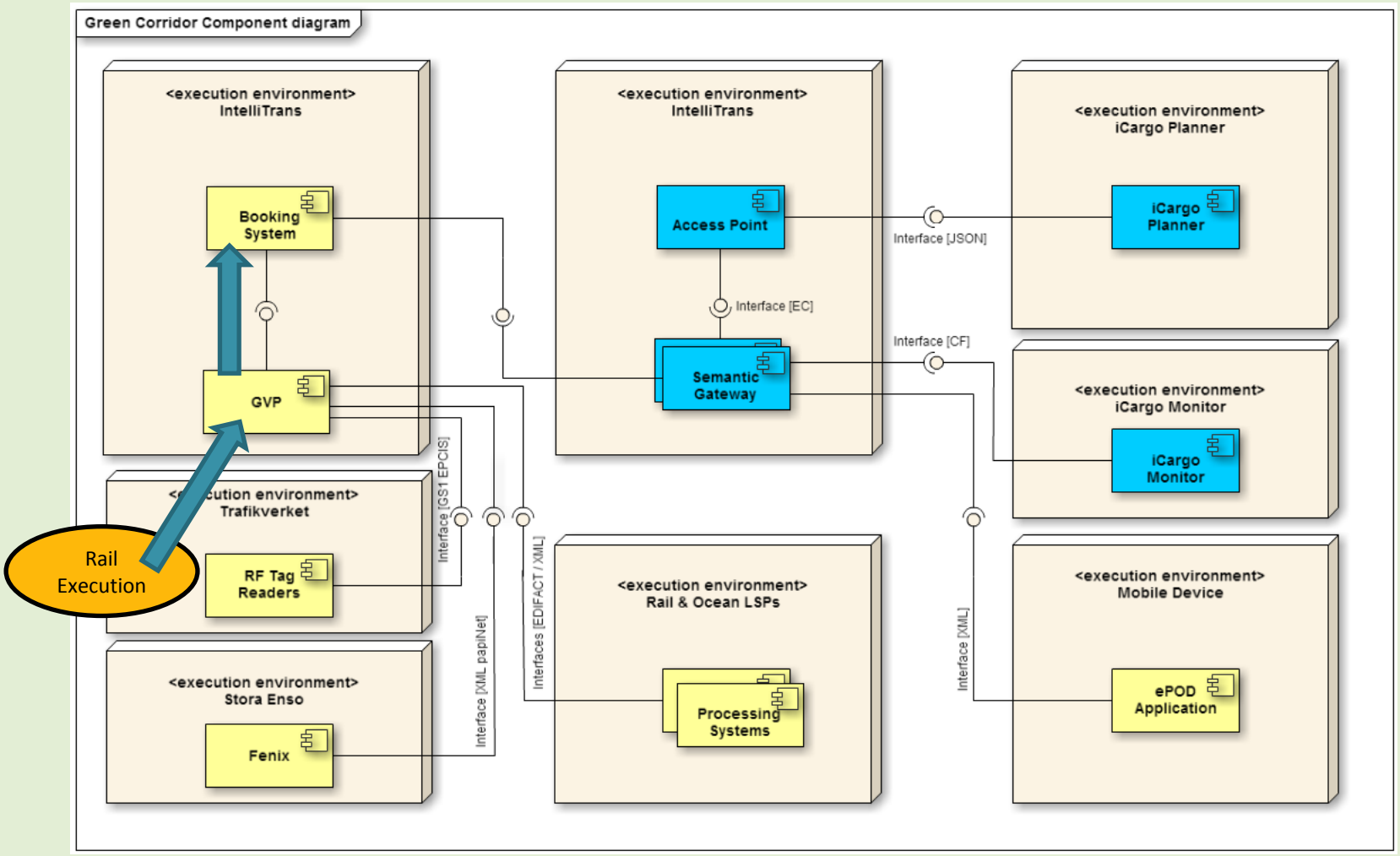
LSC search –Request Bookings



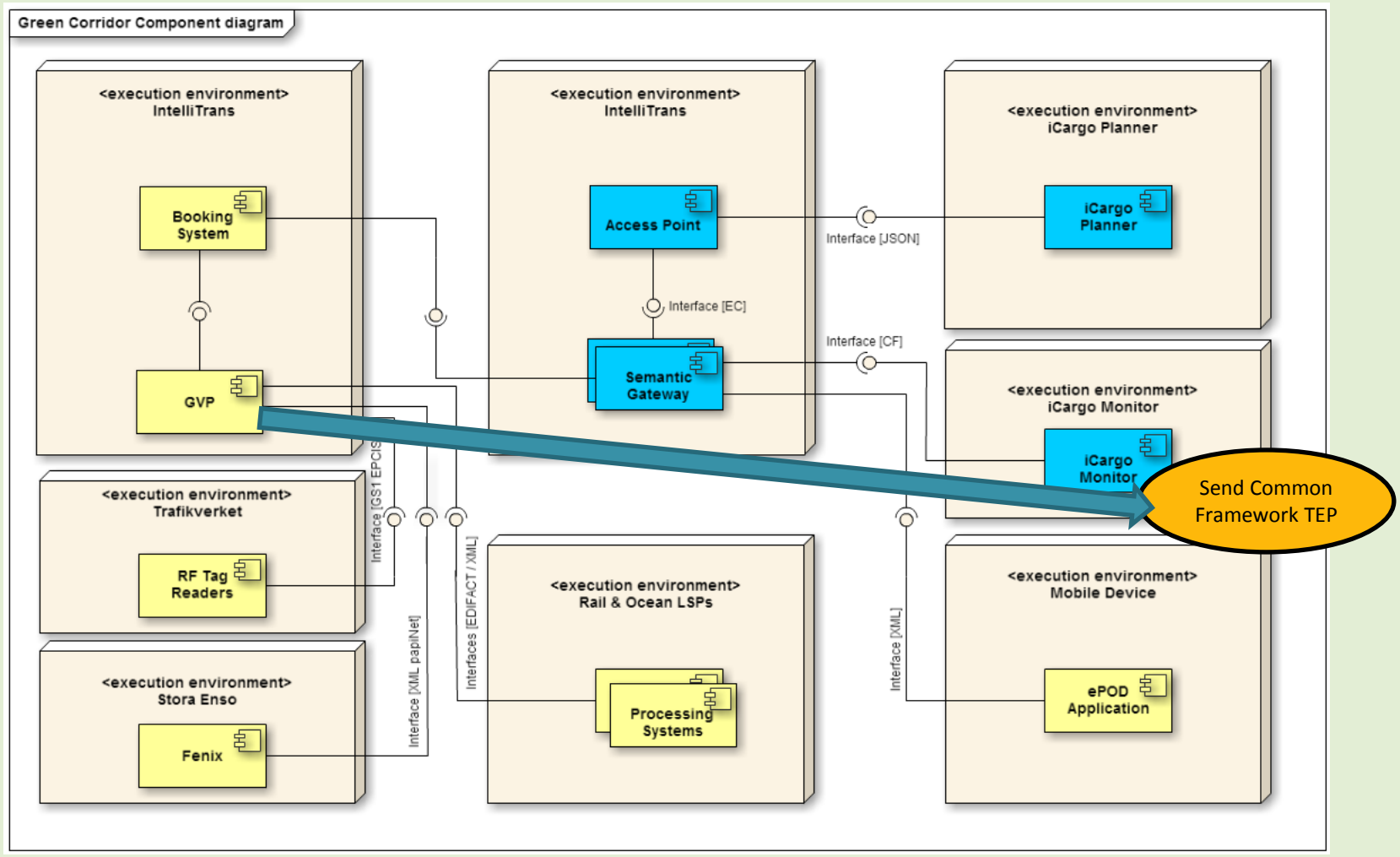
LSC search – Confirm Bookings



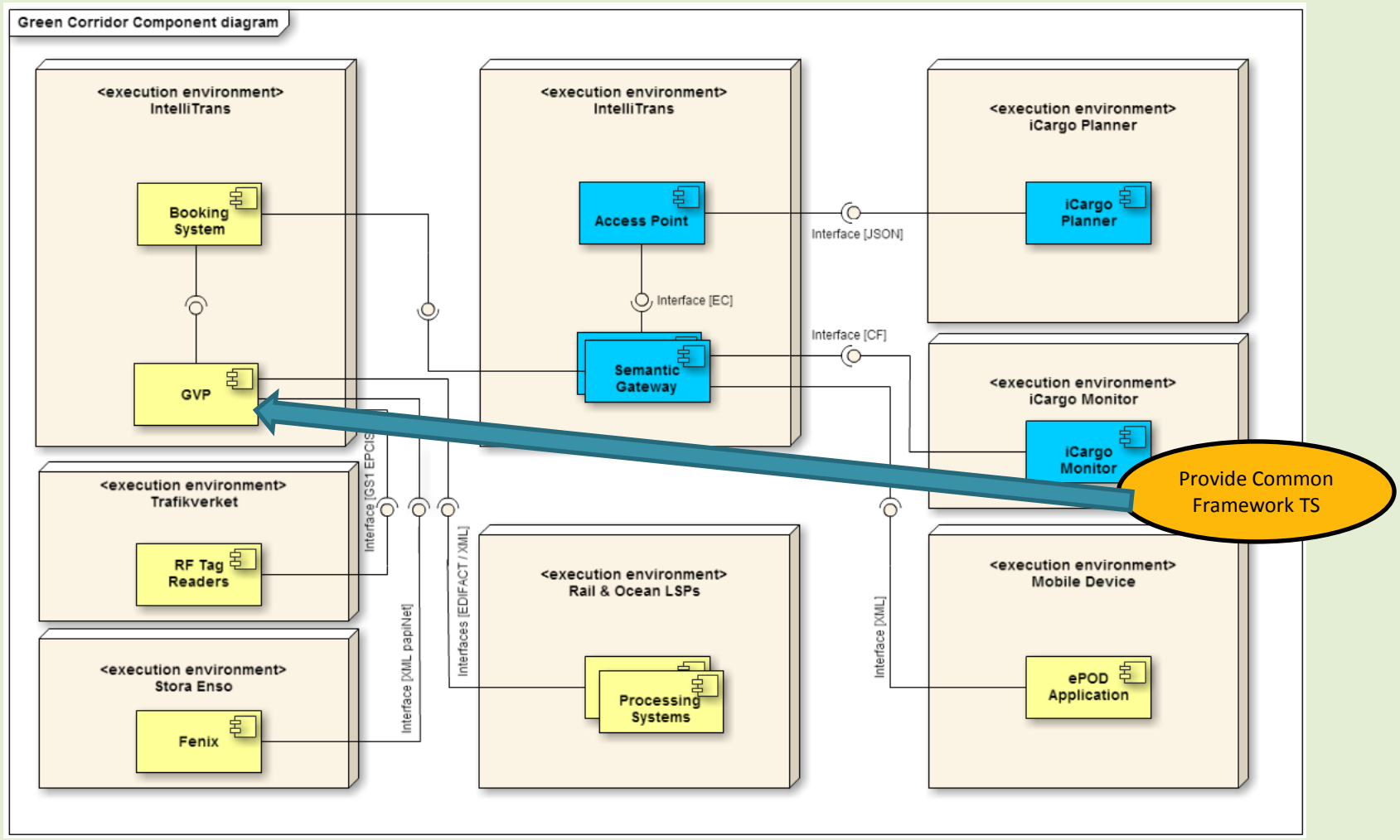
Rail Execution



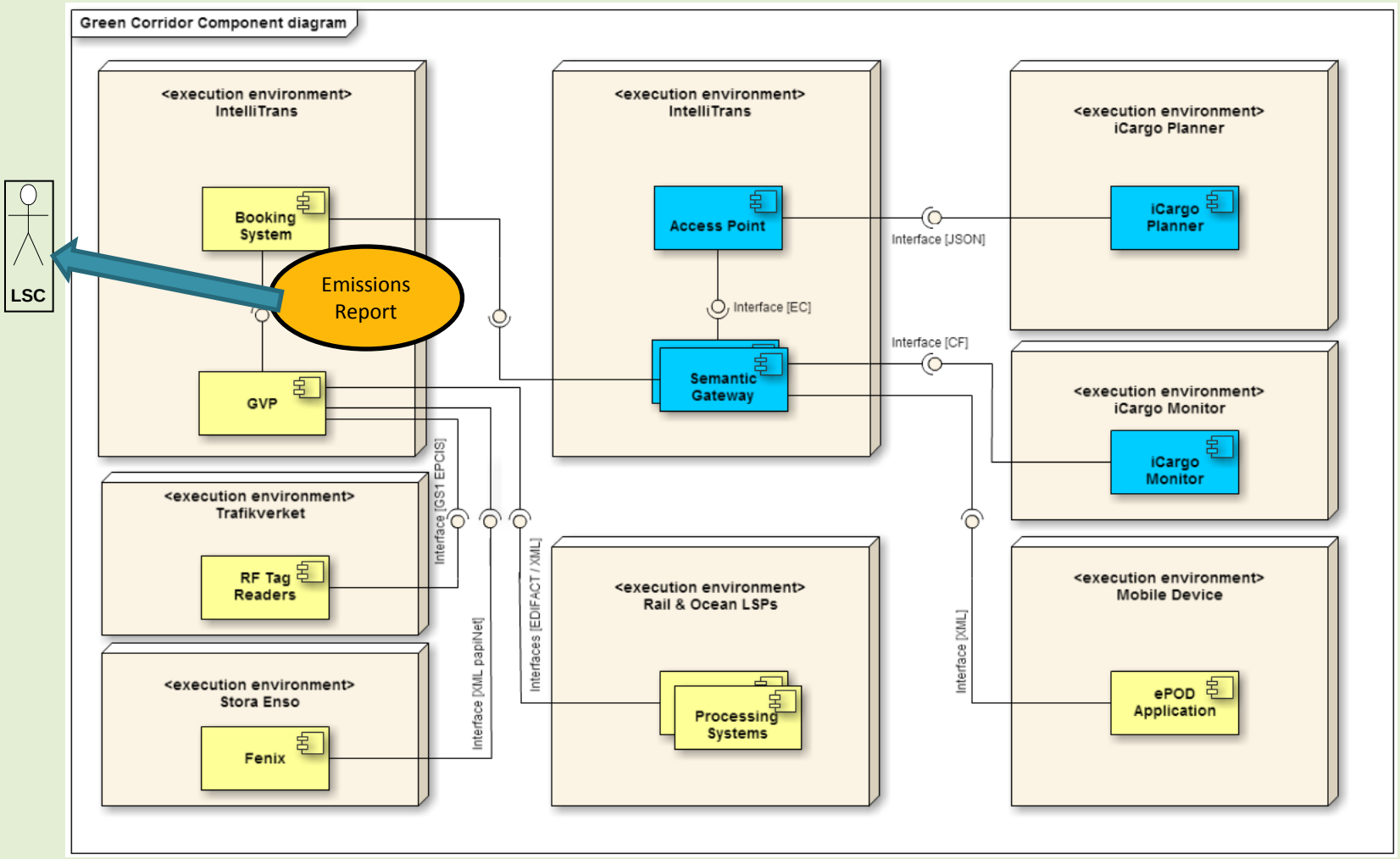
iCargo Monitor – Transport Execution Plan



iCargo Monitor – Transport Status



Emissions Reporting



Conclusion

- Rail Execution Data enables pro-active monitoring of movements, allowing dynamic re-planning of onward transport
- iCargo Planner and Emissions Calculator provides consistent Emissions standards
- iCargo Monitor provides short sea status, allowing alerting of delays in logistics chain
- Easily enables further rail and short sea LSPs to become connected

IntelliTrans is based in UK, Sweden and US

iCargo

Intelligent Cargo in Efficient and Sustainable Global Logistics Operations

Partners

Coordinator

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SEVENTH FRAMEWORK PROGRAMME