

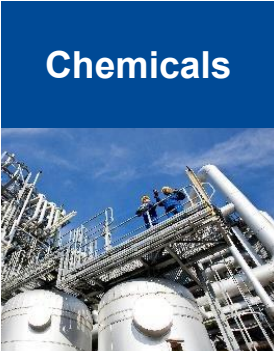
Gate-to-Gate Logistics Optimization – Leveraging Efficiencies through Digital Transformation

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European Supply Chain Summit 2025, Antwerp

BASF's segments

Core businesses



Petrochemicals
Intermediates



Performance
Materials
Monomers



Dispersions &
Resins
Performance
Chemicals



Care Chemicals
Nutrition &
Health

Standalone businesses



Environmental
Catalyst and
Metal Solutions



Battery
Materials



Coatings



Agricultural
Solutions

Verbund Site Ludwigshafen

One of the world's largest integrated chemical complex



33,370*
Employees
BASF SE



~ 230 km
Rail tracks



~2000
Buildings



~ 106 km
Roads



~200
Production
plants



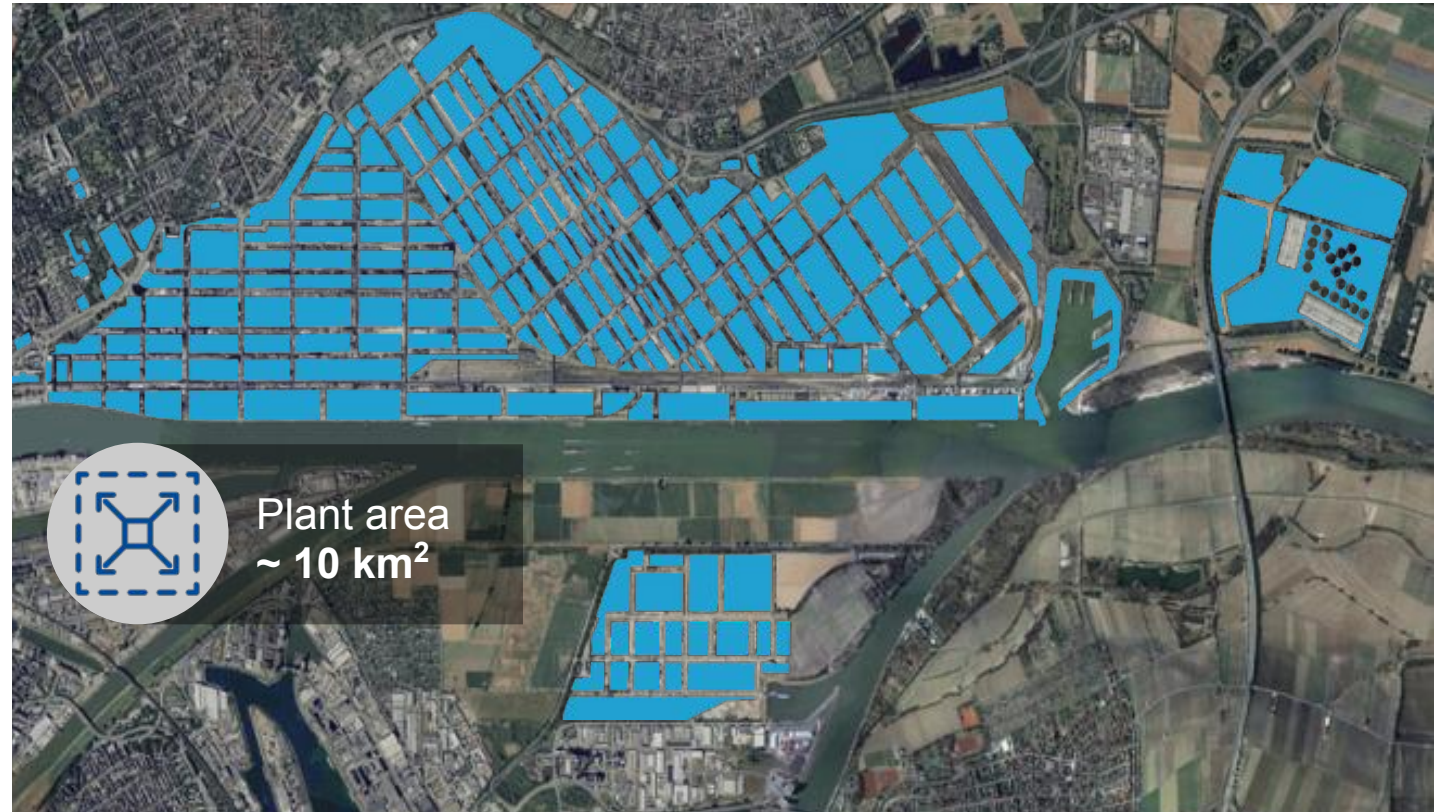
~ 2,850 km
Pipelines



**>1000 different
products**
produced on-Site



6.8 Mio. t
Sales product
per year



BASF is transforming its digital strategy to improve end-to-end truck processes

- At peak times **2,000 trucks** are processed in Ludwigshafen per day driving significant complexity
- **Truck rejections** and **truck turn around delays** impact **BASF**, **our carriers**, and our **customers**
- Delivering a **step change** in our truck processes will **accelerate the gate-to-gate process**, **reduce plan deviations**, and **assure on-time deliveries**
- **Harmonized digital tools & processes** for site Ludwigshafen using available industry solutions



With investments in its infrastructure and digital Transport Execution project, BASF laid the foundation for faster truck processing

Investments in infrastructure



Faster, digital processing

Fully digital truck processing enables a reduction in turn around times for ...

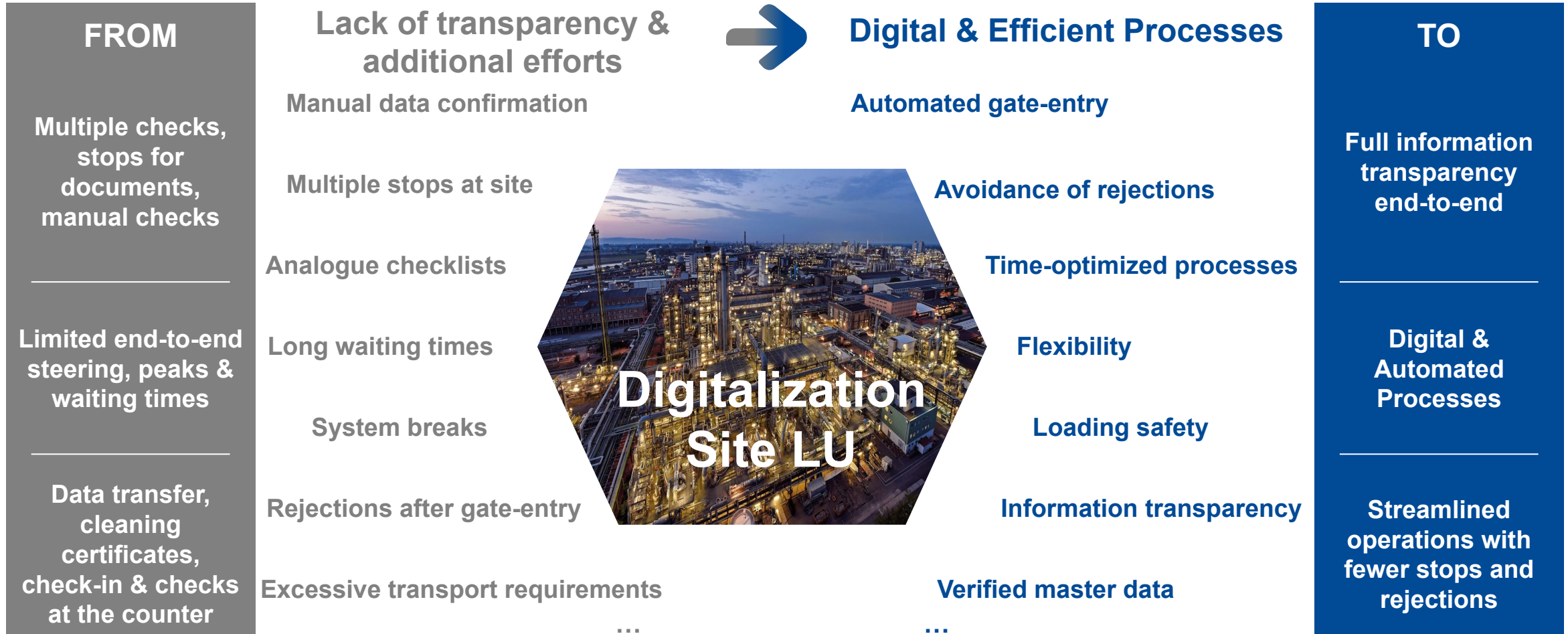
Truck arrival
(Notification, checks, resource planning,...)

Truck handling
(Identification, routing, documents, control,...)

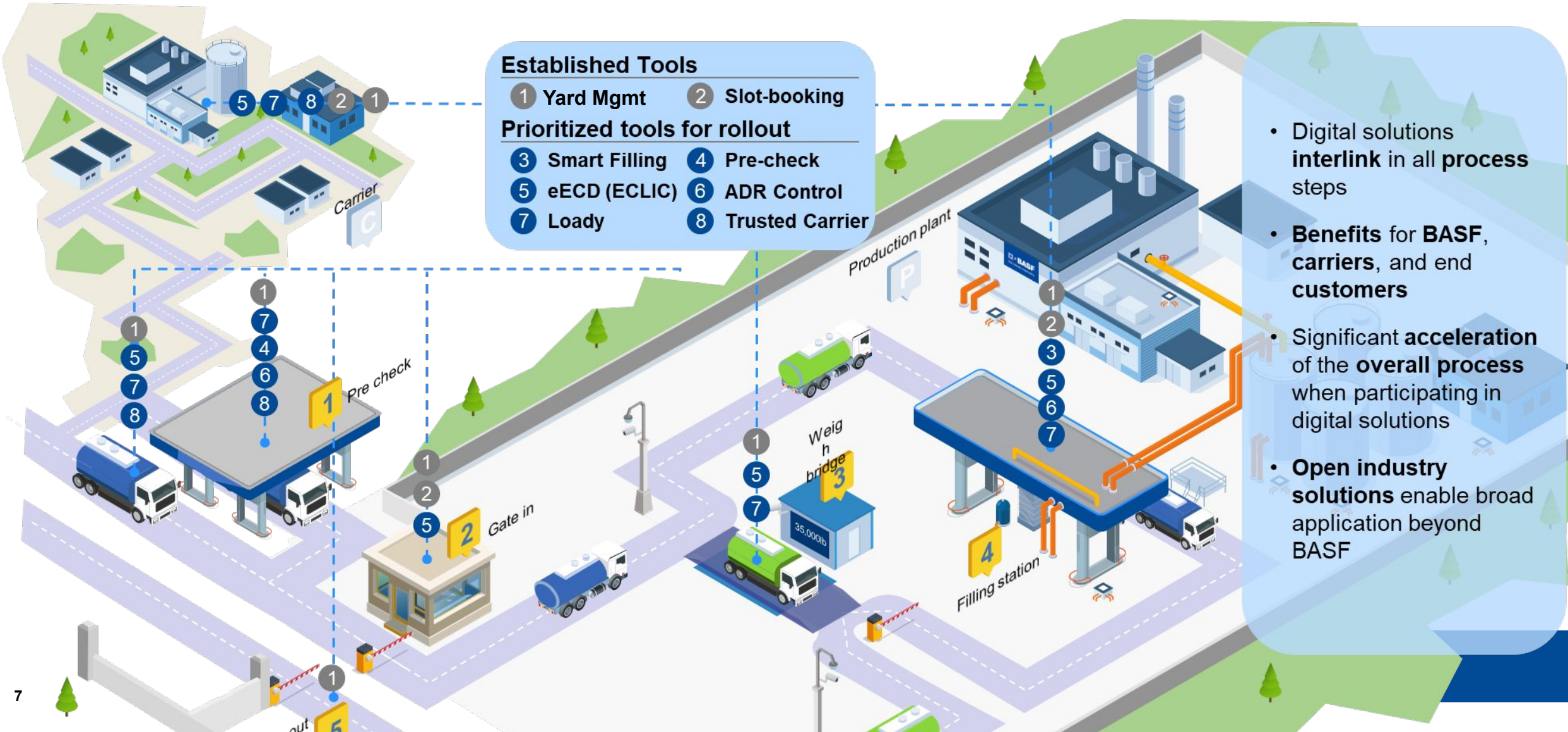
Loading stations
(Prioritization, avoidance of queues and traffic jams,...)

Plant exit
(Checks, time stamp, departure,...)

A step-change in digitalization and integration is needed to shorten truck cycle times, avoid manual efforts and eliminate inefficiencies



A digital, integrated and fully interconnected end-to-end process for truck handling based on open industry platform solutions

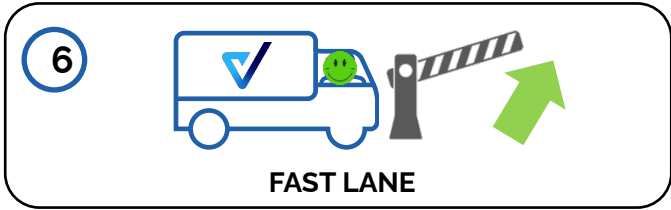


Fast Lane: Automated site access to BASF in Ludwigshafen with Trusted Carrier's Wallet and Asset services



- 1 Creation of a company account on the Trusted Carrier platform
- 2 **Asset upload**
(via API, CSV, or manually)
- 3 Account creation in the Driver **CTC Wallet app**
- 4 Linking the permanent ID card to the app at plant security

Conducted by carriers in advance of first Fast Lane use



ECLIC electronic cleaning certificates to be rolled out as an integral part of future digital gate-to-gate process

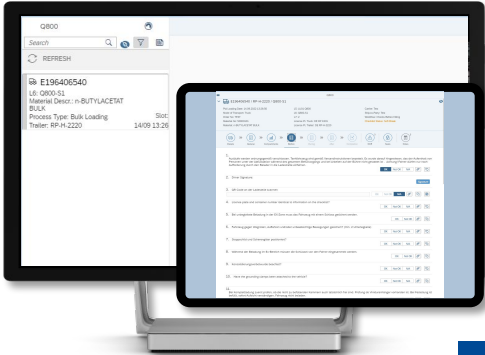
Digital data sharing solution for cleaning certificates

- Industry associations (essenscia, Cefic, EFTCO, ECTA) driven initiative striving for standardization and trustful digital collaboration in chemical logistics
- Chemical industry standard for digital cleaning certificates (eECD)
- Increased Responsible Care / safety / quality



Digital integration in End-to-End process

- ePLR (Electronic previous load restrictions) solution with Loady to allow for automated rejections & proof previous load checks
- Interface into SmartFilling Review digital documents at the loading station on a tablet



Loady will provide the logistics masterdata backbone as a fully integrated platform with interfaces to all stakeholders and systems

Digital master data (Loading, Unloading requirements)

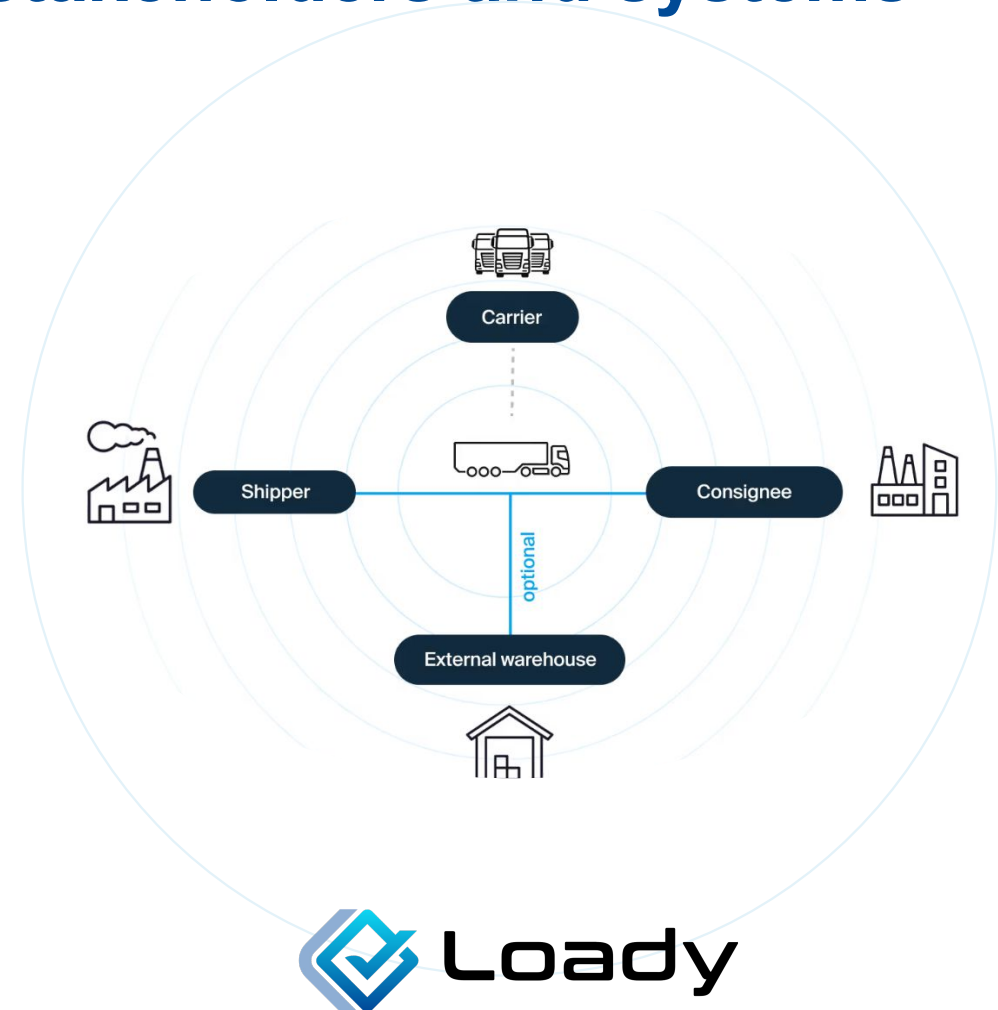
- Standardized & harmonized setup of master data
- Fully integrated with digital gate processes
- Reduction of rejections & troubleshooting
- Reduction of lost loading and unloading slots

Loady for Tender – Tender & requirements management

- Reduction of tender preparation times as all data is maintained & updated in Loady

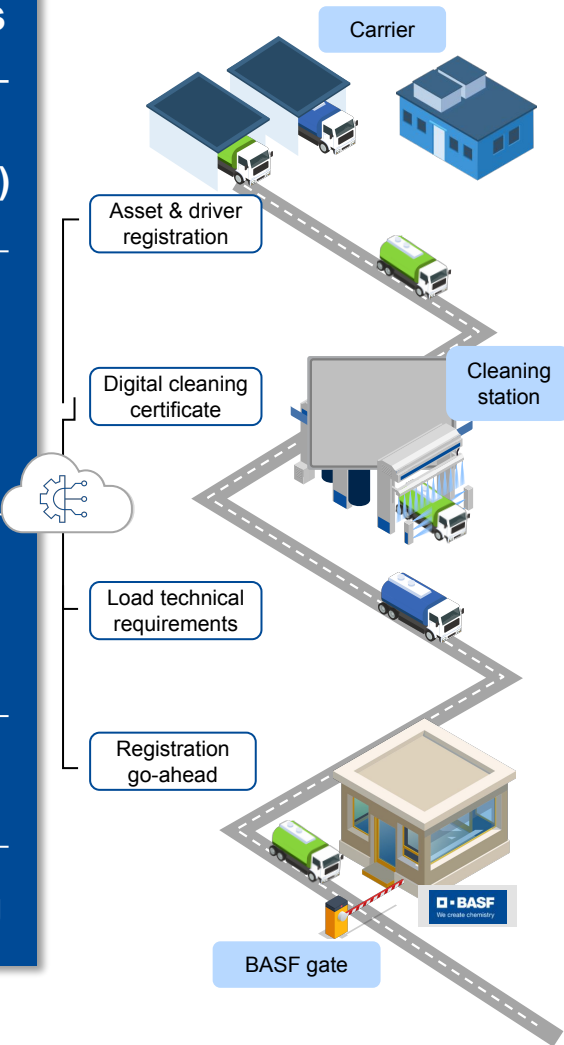
Automatic checking of preloading restrictions

- Structured data & centralized database to store and manage all preloading restrictions, including previous load restrictions and cleaning requirements
- Integration with eECD (cleaning certificates) & ePPL (proof prev. load) to allow for automatic rejections



New digital processes will become a site wide standard and provide benefits for carriers and BASF

- Digital process**
- 1 Trusted Carrier (CTC)
 - 2 ECLIC
 - 3 Loady
 - 4 Pre-check
 - 5 Smart Filling



Benefits



- Automated gate processing with reduced turnaround times
- Prevention of truck rejection due to prohibited assets and/or driver
- Prevention of truck rejection due wrong/missing cleaning certificate
- Faster equipment checks with digital proof of cleaning standard
- Reduce excessive generalised transport requirements
- Structured and up-to-date master data e.g. pre-load restrictions
- Early rejections to reduce time loss due to idle times on site
- Digital process for payload optimization and document handling

Expectations towards carrier



- Register your vehicle, equipment, and drivers through the CTC portal
- Link BASF badge with CTC wallet app
- Provision of ECLIC standard cleaning certificates
- Request digital certificates from cleaning stations, support further roll-out of ECLIC
- Utilization of pre-loading restrictions checks
- Utilization of tendering platform
- On-time arrival & utilization of pre-check facilities
- E-Certificates through ECLIC for seamless process integration

Summary

- **Digitalization** is the key enabler for **efficiency gains** and **cost savings** in logistics
- The alignment of processes and **digital data exchange between all stakeholders** in the logistics chain is essential
- Joint approach to develop **standards for digital documents and connectivity** is key
- Usage of **open industry solutions** (e.g. ECLIC) and **data exchange platforms** (e.g. Trusted Carrier, Loady) allow for reduction of data maintenance efforts
- Carriers and shippers need to **embrace digital tools** and data exchange platforms to allow for **higher automation** and **eliminate inefficiencies** in daily routines



We create chemistry