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Asset Information Lifecycle Management

Integration and digitalisation of lifecycle phases

Welcome to Amsterdam Airport

Schiphol

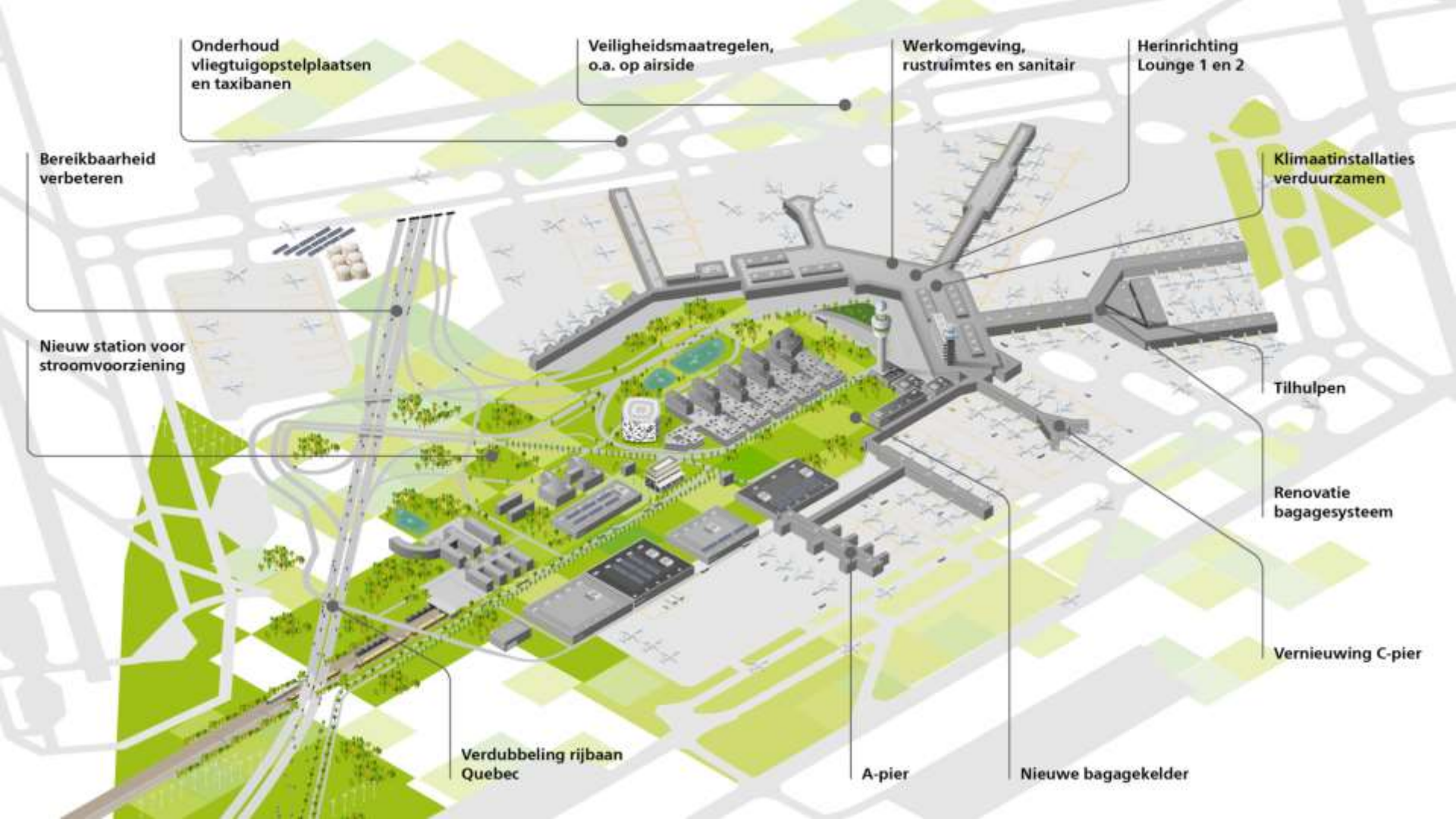
This presentation is part of GWF Session with the subject:

Transforming the Built Environment with Data-Driven Approaches

- Streamlining Infrastructure Workflows through Federated Data Platforms
- Leveraging Common Data Environment to Empower Built Environment Assets
- Data Analytics and IoT Integration in Ensuring Built Environment Sustainability

Agenda

- Schiphol Airport
- Projects, assets and information
- Information lifecycle management
- Borders
- Standards
- Linked data and BIM

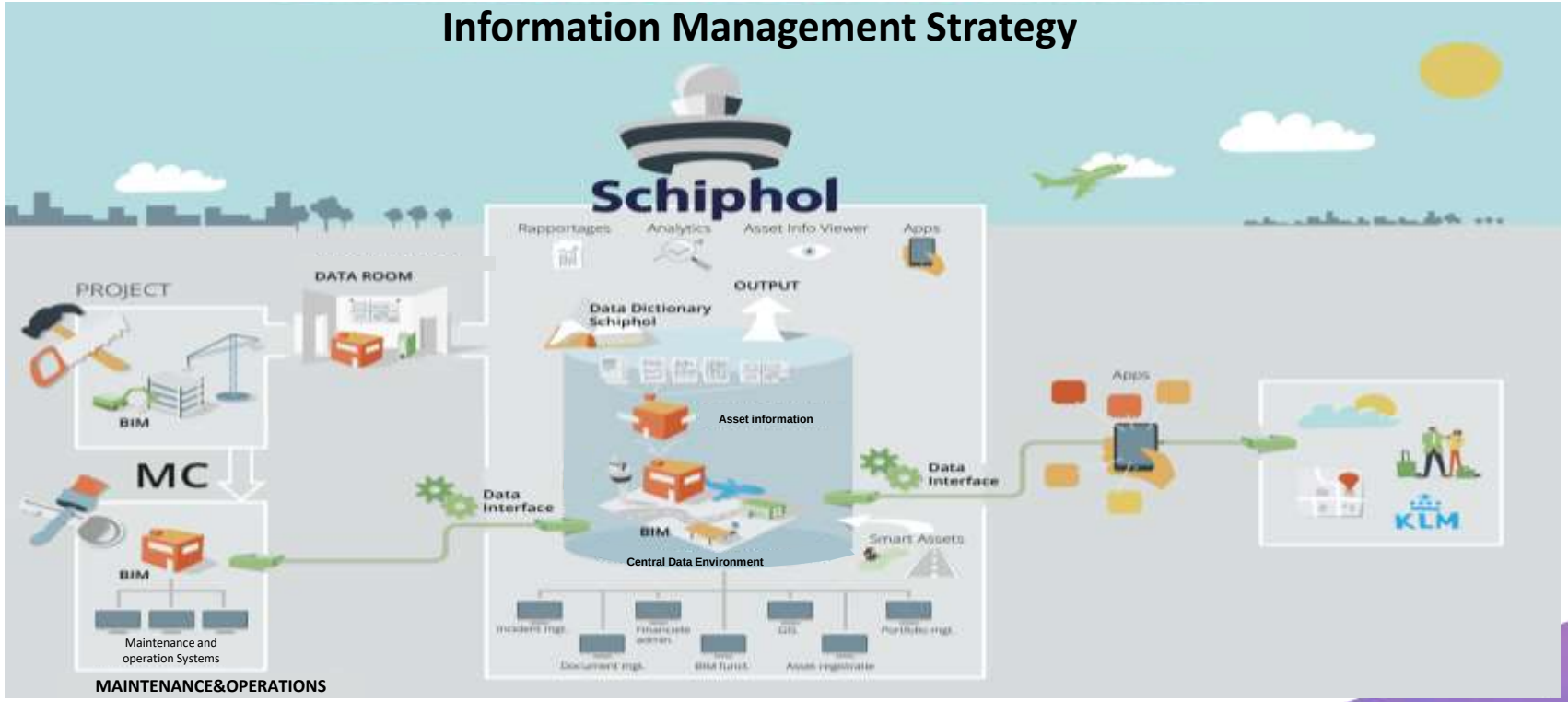

Onderhoud vliegtuigopstelplaatsen en taxibanen
Veiligheidsmaatregelen, o.a. op airside
Werkomgeving, rustruimtes en sanitair
Herinrichting Lounge 1 en 2
Bereikbaarheid verbeteren
Klimaatinstallaties verduurzamen
Nieuw station voor stroomvoorziening
Tilhulpen
Renovatie bagagesysteem
Vernieuwing C-pier
Verdubbeling rijbaan Quebec
A-pier
Nieuwe bagagekelder

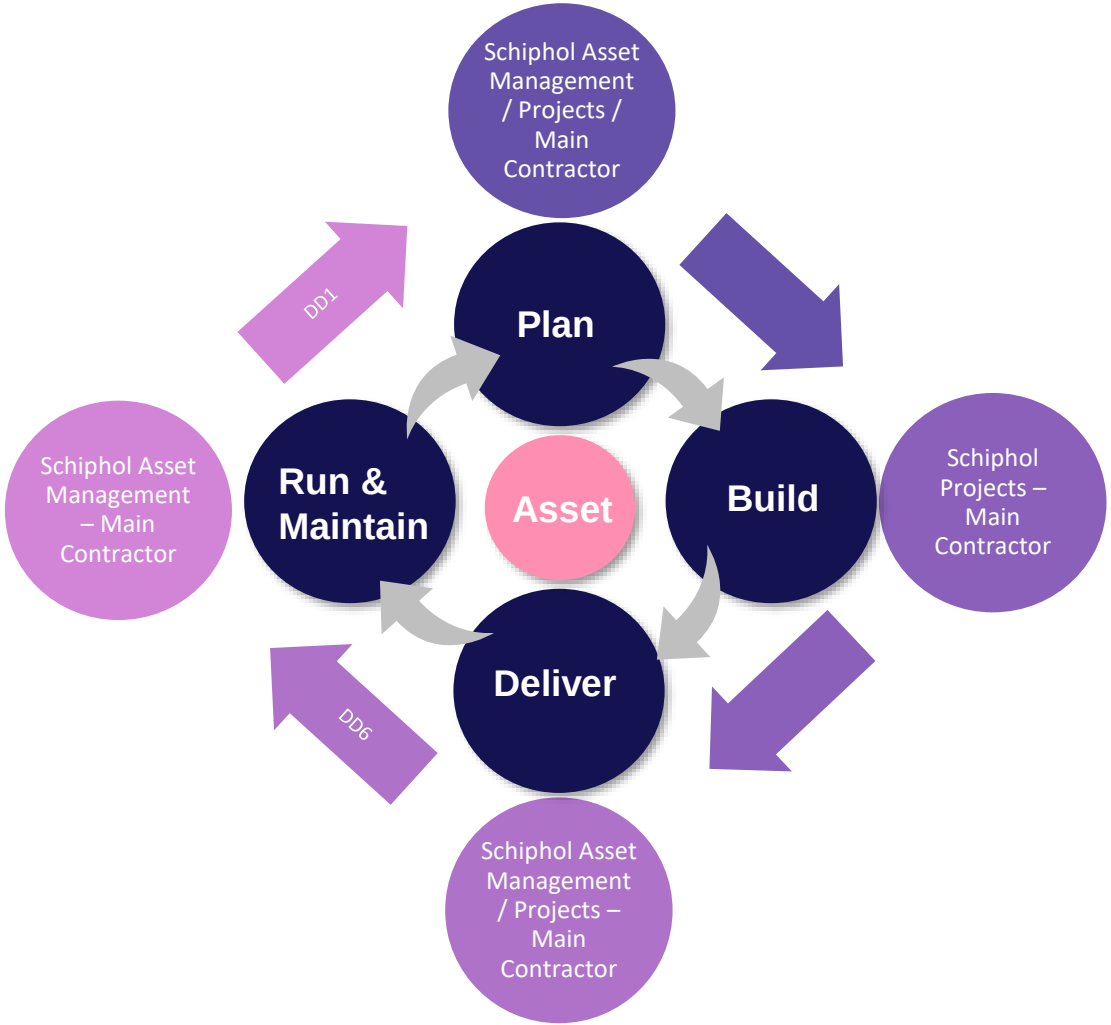
Vision

Asset management:
By managing asset information throughout the entire asset lifecycle, we enable Schiphol to create the world's most sustainable and high quality airports

Based upon vision: Schiphol 2050 - Connecting your world: creating world's most sustainable and high quality airports

Current asset information lifecycle




Schiphol Asset Management / Projects / Main Contractor
DD1
Plan
Schiphol Asset Management – Main Contractor
Run & Maintain
Asset
Build
Schiphol Projects – Main Contractor
Deliver
DD6
Schiphol Asset Management / Projects – Main Contractor

Architecture principles

- Information is an Asset → structured information has value
- Information Management and Asset Management are inseparable
- Geospatial information is integral part of asset information management
- Information is accessible and available
- Information Management follows technological developments
- Open and continuous registration and exchange of Information
- Schiphol determines (open) boundaries
- Information is up-to-date, reliable and complete

Schiphol and Open Standards

Standards:

- ***Open*** *= Sharing*
- ***Standards within vision Schiphol*** *= IFC, BCF, IDM, ISO19650 , Linked Data Technologies, etc*

Schiphol is unable to support just one specific software vendor;

open standards facilitate interoperability and accessibility and prevent single vendor lock-in.

Benefits:

- Open, shareable information unlocks more **efficient**, **transparent** and **collaborative** ways of working throughout the entire life-cycle of assets.
- Will (eventually) result in increased **collaboration**, **communication** and **universally** usable tools.

"Open Standards… constantly evolving and growing until it reaches its maturity, which then is replaced, or included in, the next method."

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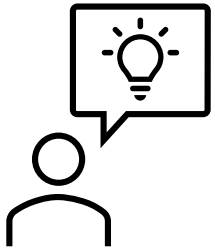
Benefits of using open standards

- Efficiency
- Transparency
- Flexibility
- Ability to make decisions without barriers
- Increase innovation
- Improve information transfer and usage
- Facilitate broader adoption



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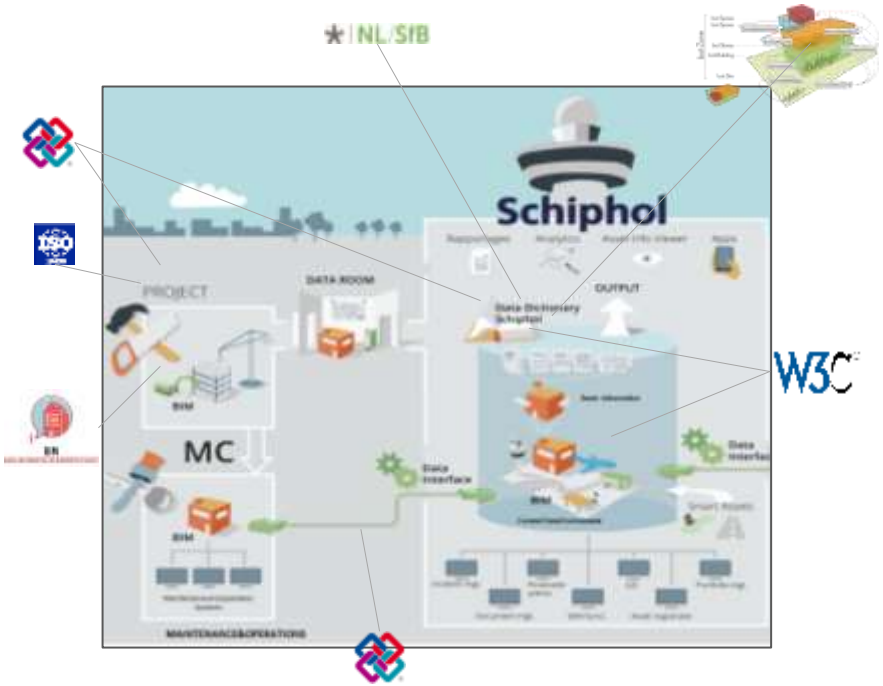
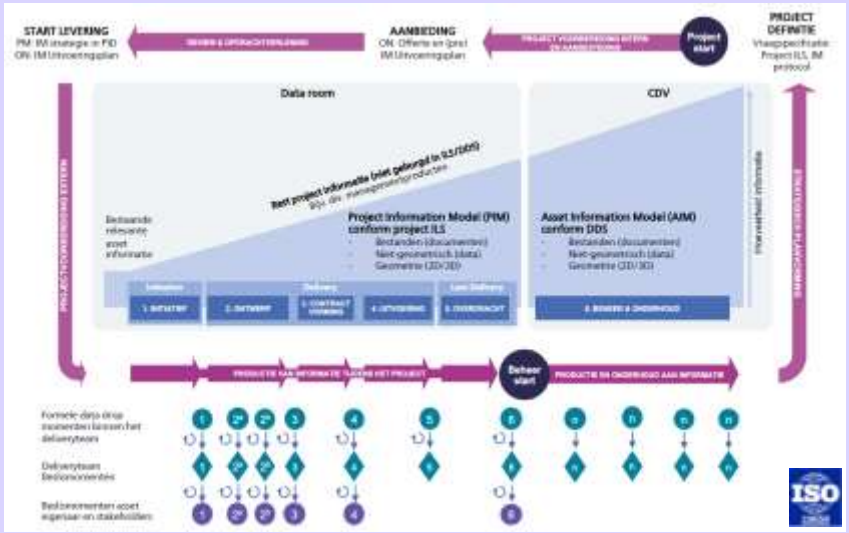
Current cycle with standards

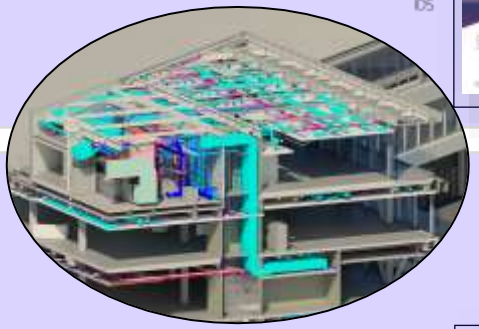


Challenges and opportunities

Re-using data throughout the entire lifecycle



Schiphol policy : openBIM



AUTODESK® REVIT®

BIM source file requirements

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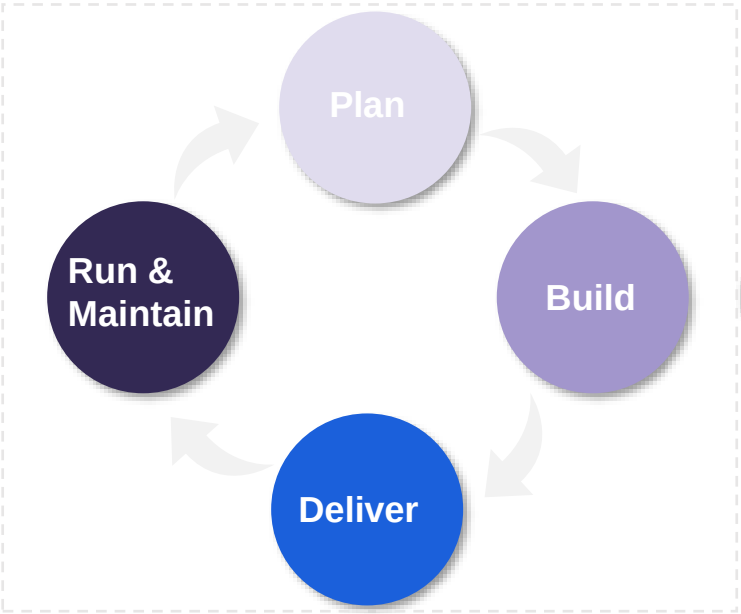
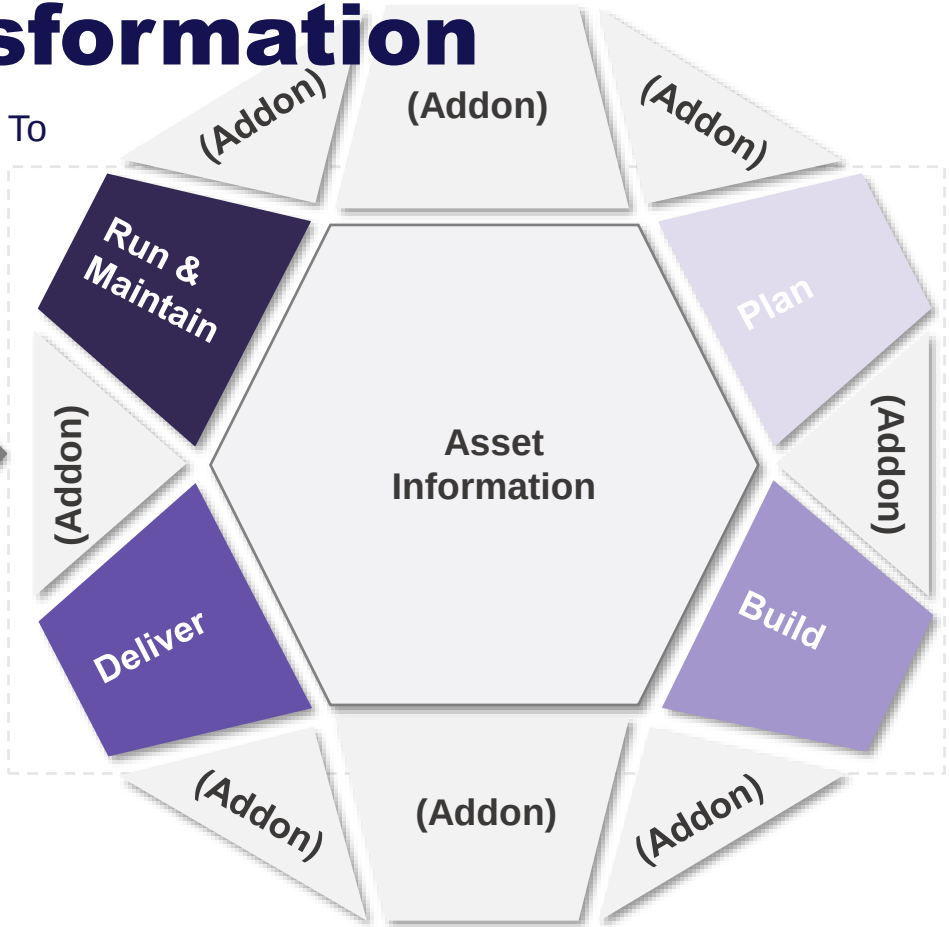
Asset information lifecycle management transformation

From



To



Examples of integrated asset information

Orville

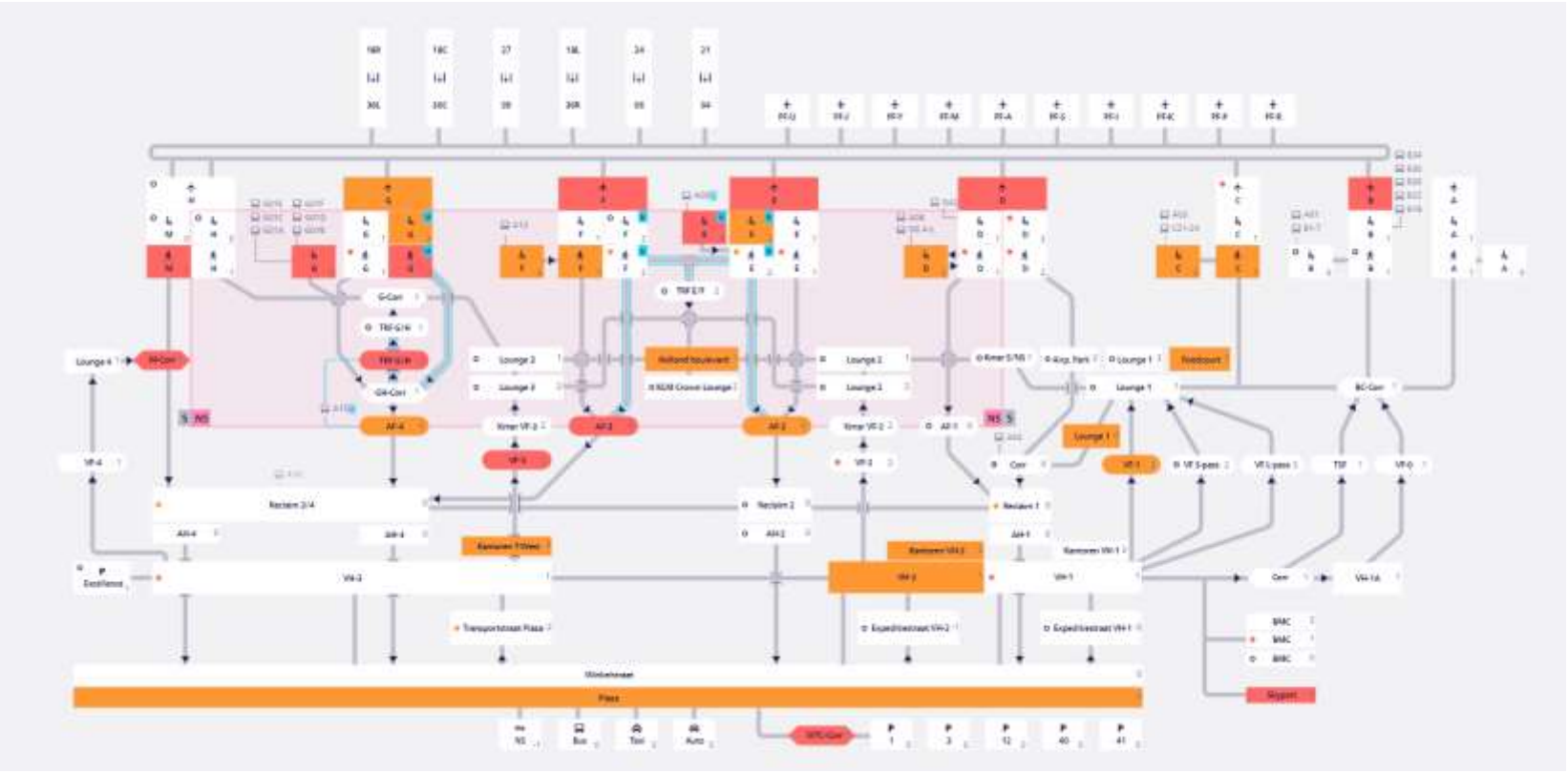
Shows the actual availability of process locations and the assets contributing to a function on that process location. It integrates data from all needed sources to a dashboard with an easy to understand overview, giving information to make decisions

Wilbur

Shows what is happening at Schiphol now, what is going to happen next, and helps Schiphol professionals make better decisions

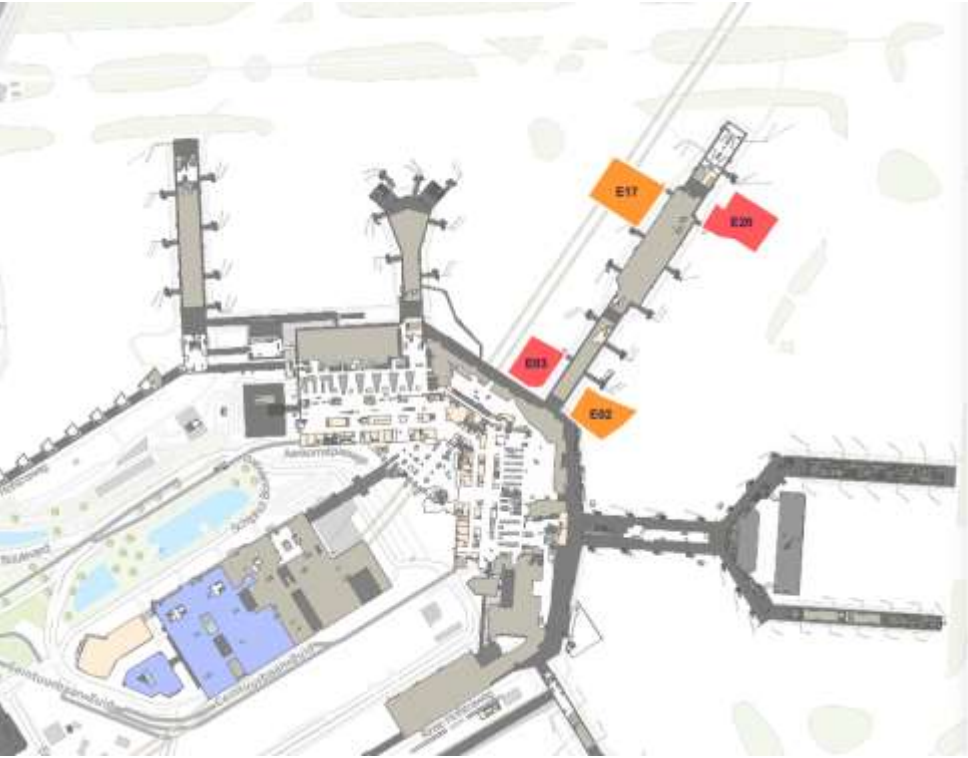
Schematic map Schiphol

Show all areas of Schiphol



Process location details

Show assets in process location



VOP E20

Non Operational

E-pier - BG

Assets

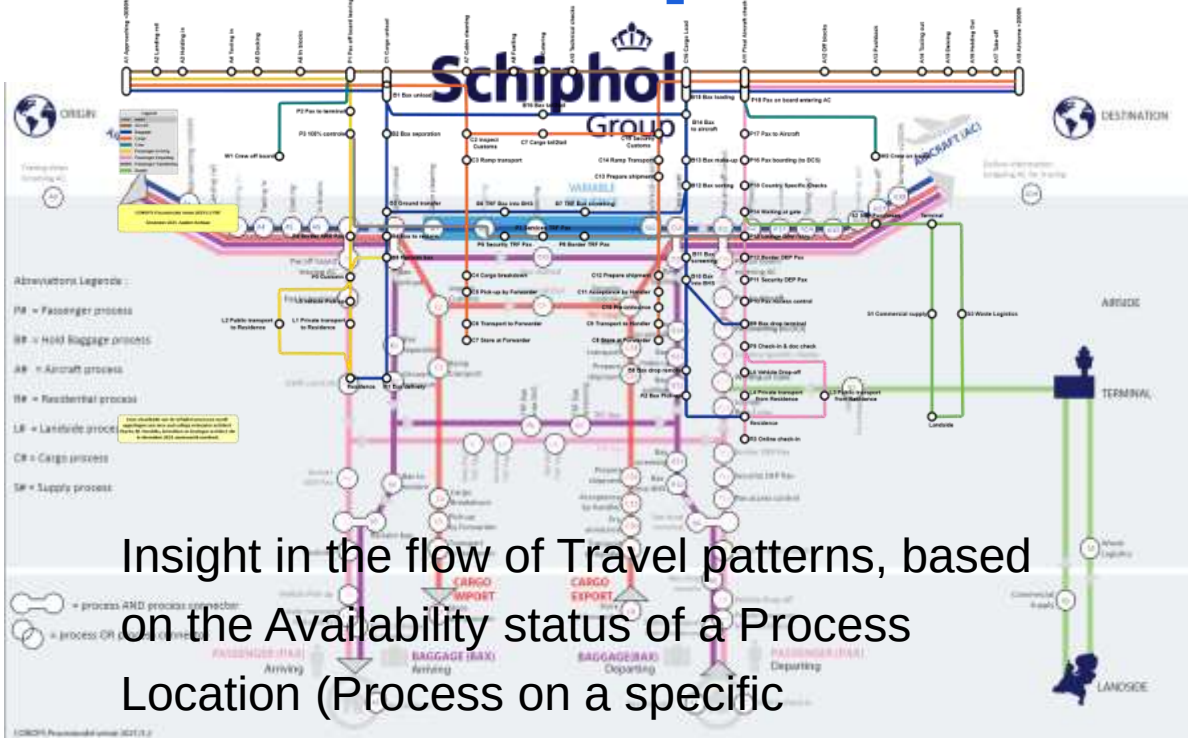
Asset availability

	ACSM status	Laatst gewijzigd	IEI3 tickets
400HZE20A	Operational disturbed	14 jun 2022 16:49	
400HZE20B	Operational disturbed	13 jun 2022 16:53	
PAXE20	Operational	11 jun 2022 19:06	414425
VDGSE20	Operational	18 mei 2022 08:00	
PAXE20OTW	Operational	25 apr 2022 06:55	
E20-BETONVERHARDING	-		-
E20-ASFALTVERHARDING	-		-
E20-ELEMENTVERHARDING	-		-
E20-PLV-LM350	-		-
E20-PLV-LM363	-		-
PCAE20	-		-

Incident information

orville

Digital Twin → Processes of Operations → ConOps



Insight in the flow of Travel patterns, based on the Availability status of a Process Location (Process on a specific location) and its interdependence.

Questions & Discussion

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