COGNITE

PRODUCTION OPTIMIZATION ON & OFF-SHORE

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WHAT WE’VE DELIVERED

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OPTIMIZE LIVE

AkerBP

30% - 50%

Reduction in deferrals associated with MPFM calibration

2.2-4.5 MUSD

Per year

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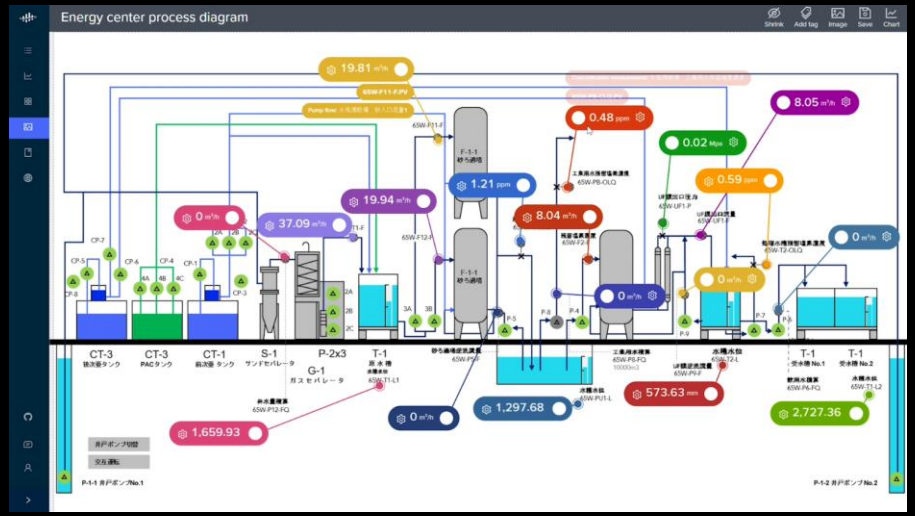
REDUCE MAINTENANCE

YOKOGAWA



Savings from optimizing maintenance routines

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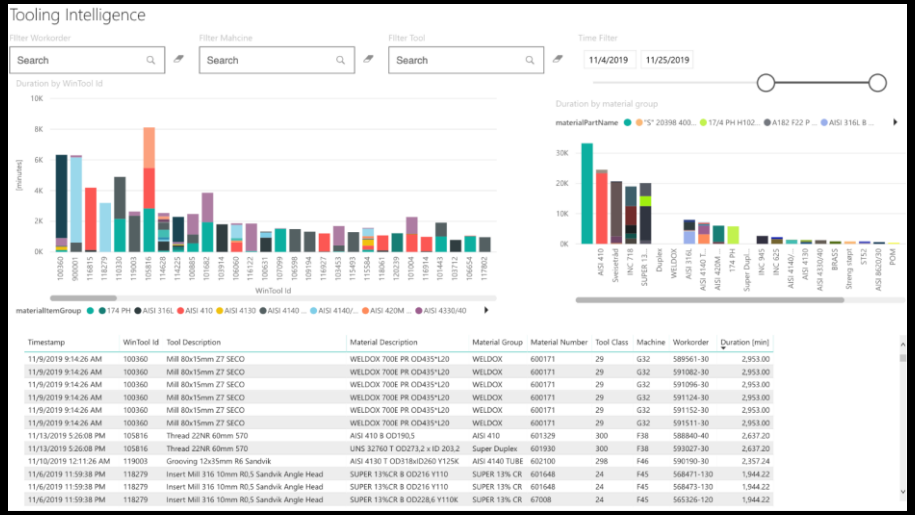
ENGINEER A BETTER PROCESS

AARBAKKE



Timestamp	WinTool Id	Tool Description	Material Description	Material Group	Material Number	Tool Class	Machine	Workorder	Duration [min]
11/9/2019 9:14:26 AM	100360	Mill 80x15mm Z7 SECO	WELDOX 700E PR OD435*L20	WELDOX	600171	29	G32	589561-30	2,953.00
11/9/2019 9:14:26 AM	100360	Mill 80x15mm Z7 SECO	WELDOX 700E PR OD435*L20	WELDOX	600171	29	G32	591082-30	2,953.00
11/9/2019 9:14:26 AM	100360	Mill 80x15mm Z7 SECO	WELDOX 700E PR OD435*L20	WELDOX	600171	29	G32	591096-30	2,953.00
11/9/2019 9:14:26 AM	100360	Mill 80x15mm Z7 SECO	WELDOX 700E PR OD435*L20	WELDOX	600171	29	G32	591124-30	2,953.00
11/9/2019 9:14:26 AM	100360	Mill 80x15mm Z7 SECO	WELDOX 700E PR OD435*L20	WELDOX	600171	29	G32	591152-30	2,953.00
11/9/2019 9:14:26 AM	100360	Mill 80x15mm Z7 SECO	WELDOX 700E PR OD435*L20	WELDOX	600171	29	G32	591511-30	2,953.00
11/13/2019 5:26:08 PM	105816	Thread 22NR 60mm 570	AISI 410 B OD190,5	AISI 410	601329	300	F38	588840-40	2,637.20
11/13/2019 5:26:08 PM	105816	Thread 22NR 60mm 570	UNS 32760 T OD273,2 x ID 203,2	Super Duplex	601930	300	F38	593027-30	2,637.20
11/10/2019 12:11:26 AM	119003	Grooving 12x35mm R6 Sandvik	AISI 4130 T OD318xID260 Y125K	AISI 4140 TUBE	602100	298	F46	590190-30	2,357.24
11/6/2019 11:59:38 PM	118279	Insert Mill 316 10mm R0,5 Sandvik Angle Head	SUPER 13%CR B OD216 Y110	SUPER 13% CR	601648	24	F45	568471-130	1,944.22
11/6/2019 11:59:38 PM	118279	Insert Mill 316 10mm R0,5 Sandvik Angle Head	SUPER 13%CR B OD216 Y110	SUPER 13% CR	601648	24	F45	568473-130	1,944.22
11/6/2019 11:59:38 PM	118279	Insert Mill 316 10mm R0,5 Sandvik Angle Head	SUPER 13%CR B OD228,6 Y110K	SUPER 13% CR	67008	24	F45	565326-120	1,944.22

+ 10%

Est. improved cutting tool efficiency

- 60%

Est. reduction in tool assemblies

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CHALLENGES WE’VE FACED

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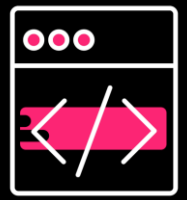
CHALLENGES

Aging equipment and infrastructure

Data variety and siloes



Lack of resident data scientists

Change management

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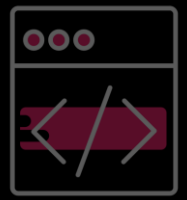
Aging equipment and infrastructure

Data variety and siloes



Lack of resident data scientists

Change management

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IOT, OPEN-STANDARDS, AND RETROFITS

Yokogawa Sushi
IoT Sensor

Open-standard
MTConnect

Equipment
retrofits

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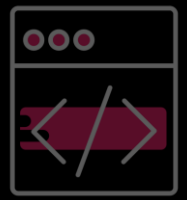
Aging equipment and infrastructure

Data variety and siloes



Lack of resident data scientists

Change management

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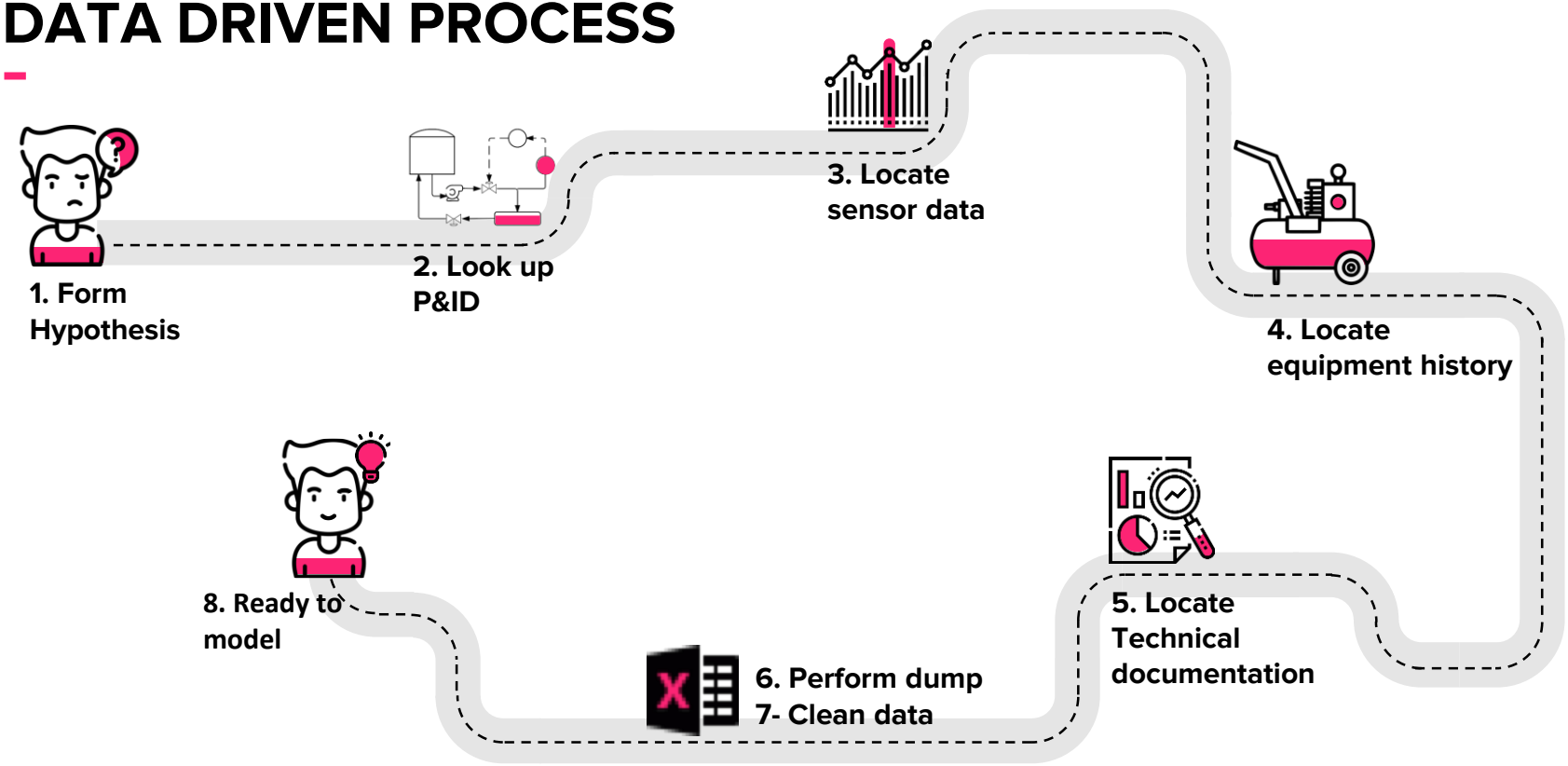
DATA DRIVEN PROCESS



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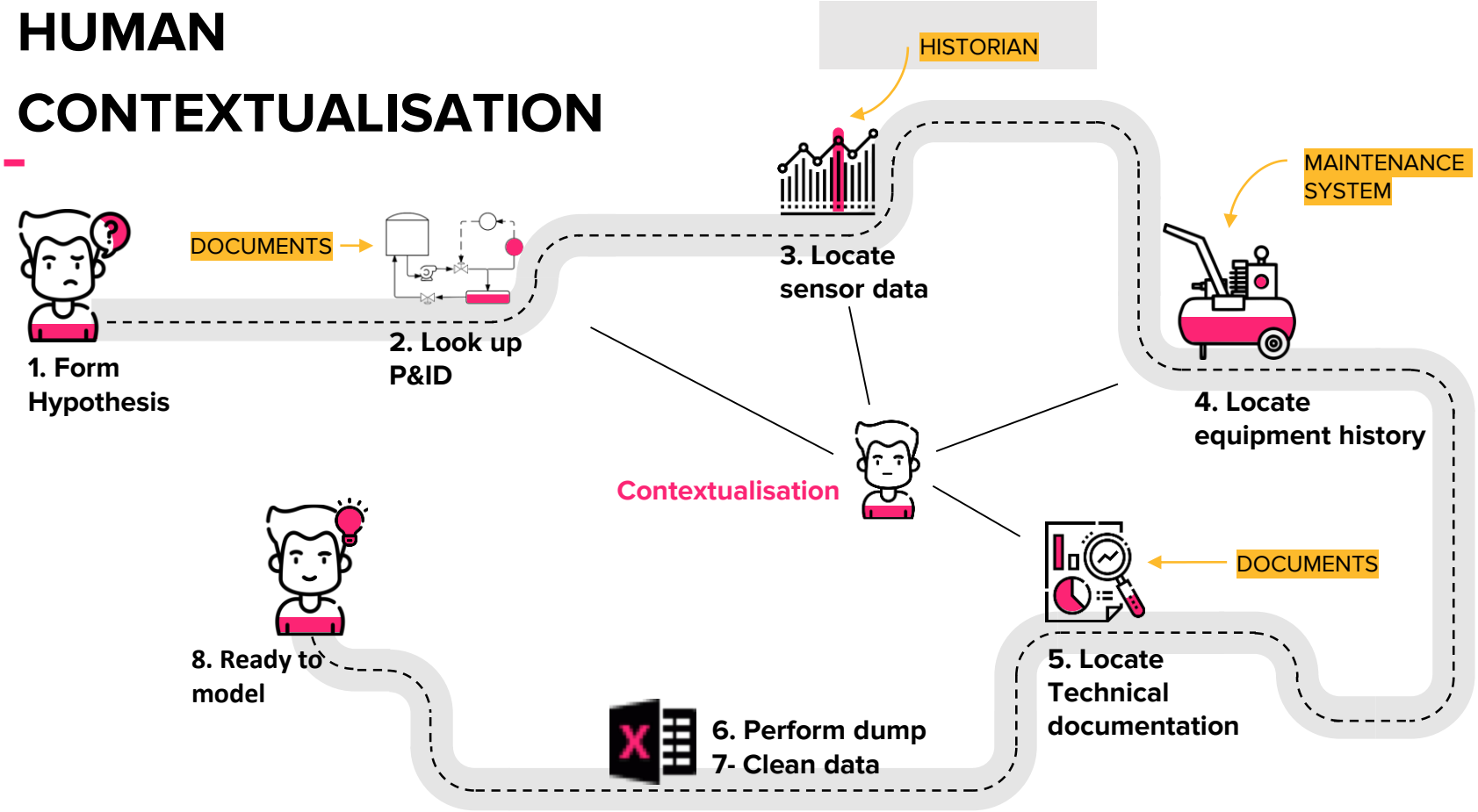
HUMAN CONTEXTUALISATION



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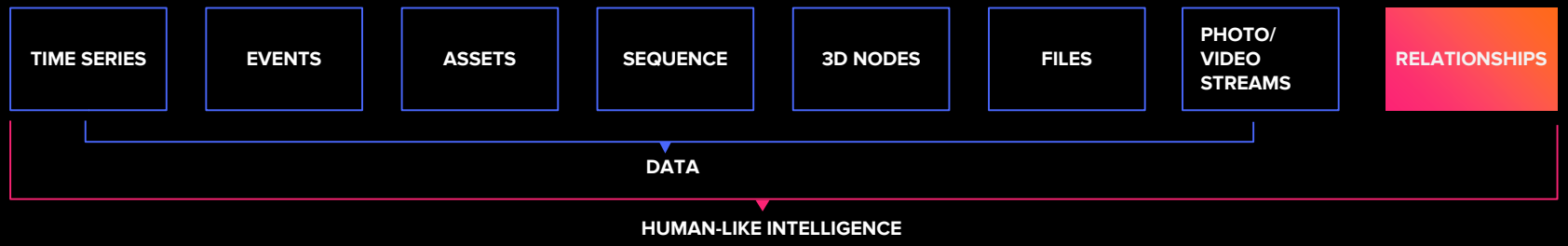
CONTEXTUALIZATION IS ENABLED BY THE DATA MODEL (RESOURCE TYPES)

CONTEXTUALIZATION creates a new knowledge data type, **relationships,** that transforms accessible data into accessible human-like intelligence



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BUILD THE FOUNDATION

COGNITE DATA FUSION
CONTEXTUALIZED DATA

IT DATA

- EQUIPMENT HIERARCHY DATA
- ERP & WORK ORDER DATA
- OTHER TABULAR DATA

&

OPERATIONAL DATA

- IOT LOGS
- TIME SERIES
- PLMS EVENTS
- 3D & PHOTOGRAMMETRY

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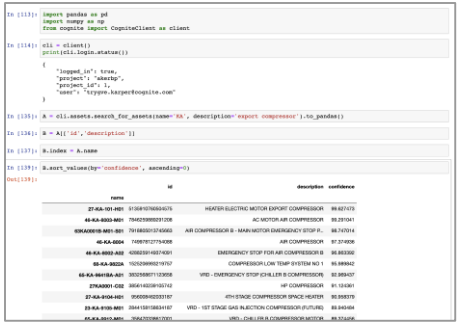
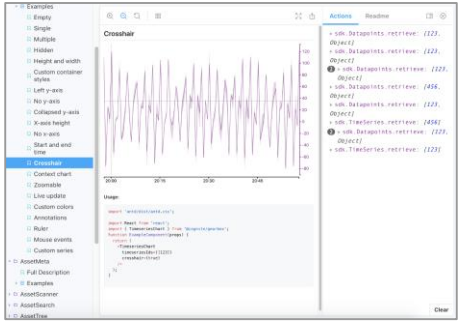
EMPOWER YOUR WORKFORCE TO FIND THE RELEVANT DATA

DISCOVERY APP



SDKs AND APIs



GEARBOX APP COMPONENTS

COGNITE DATA FUSION
CONTEXTUALIZED DATA

IT DATA

- EQUIPMENT HIERARCHY DATA
- ERP & WORK ORDER DATA
- OTHER TABULAR DATA

&

OPERATIONAL DATA

- IOT LOGS
- TIME SERIES
- PLMS EVENTS
- 3D & PHOTOGRAMMETRY

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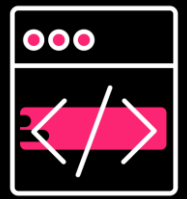
Aging equipment and infrastructure

Data variety and siloes



Lack of resident data scientists

Change management

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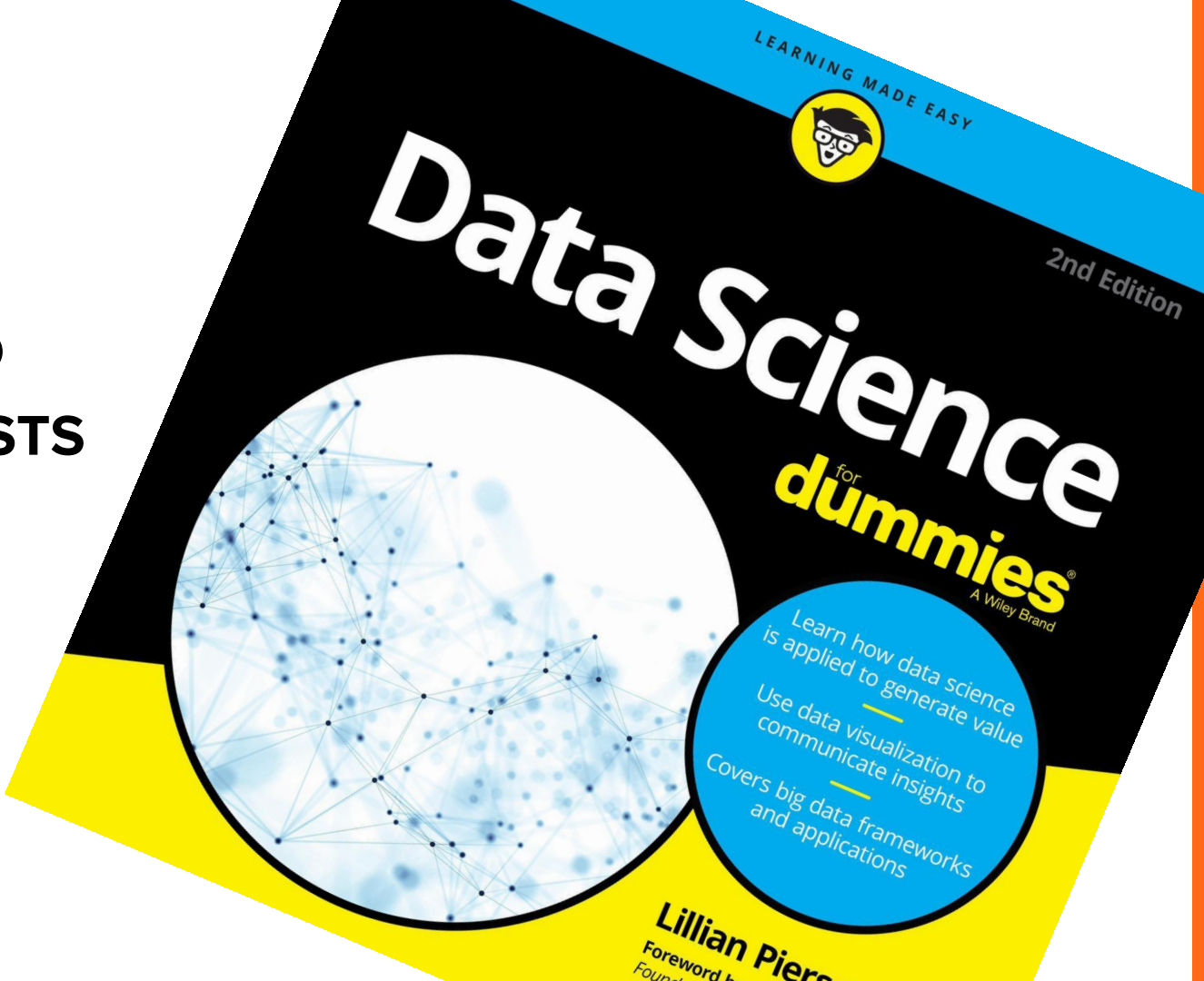
ENGINEERS TO DATA SCIENTISTS



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ENGINEERS TO DATA ~~SCIENTISTS~~ - *Problem Solvers*

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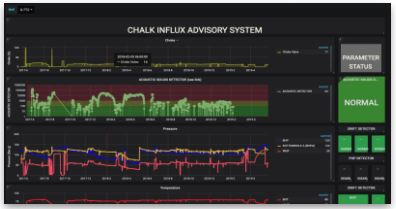
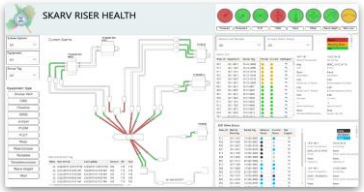
Grafana



Excel

PowerBI



OutSystems

GRAFANA PLUG-IN | ODATA CONNECTOR | POWER BI CONNECTOR | OUTSYSTEMS UI-FRAMEWORK & CONNECTOR

CONNECTORS

COGNITE DATA FUSION
CONTEXTUALIZED DATA

EQUIPMENT HIERARCHY DATA | ERP & WORK ORDER DATA | OTHER TABULAR DATA

IT DATA

&

IOT LOGS | TIME SERIES | PLMS EVENTS | 3D & PHOTOGRAMMETRY

OPERATIONAL DATA

COGNITE

PERFORMANCE BASED CONTRACTS

FRAMO
an Alfa Laval brand

130 HOURS
Reduction of maintenance per year per pump + reduced POB

FOR 3 PUMPS ON IVAR AASEN:

30% Reduced maintenance

70% Reduced shutdowns

40% Increased pump availability

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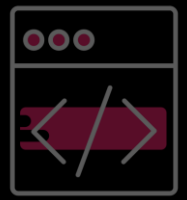
Aging equipment and infrastructure

Data variety and siloes



Lack of resident data scientists

Change management

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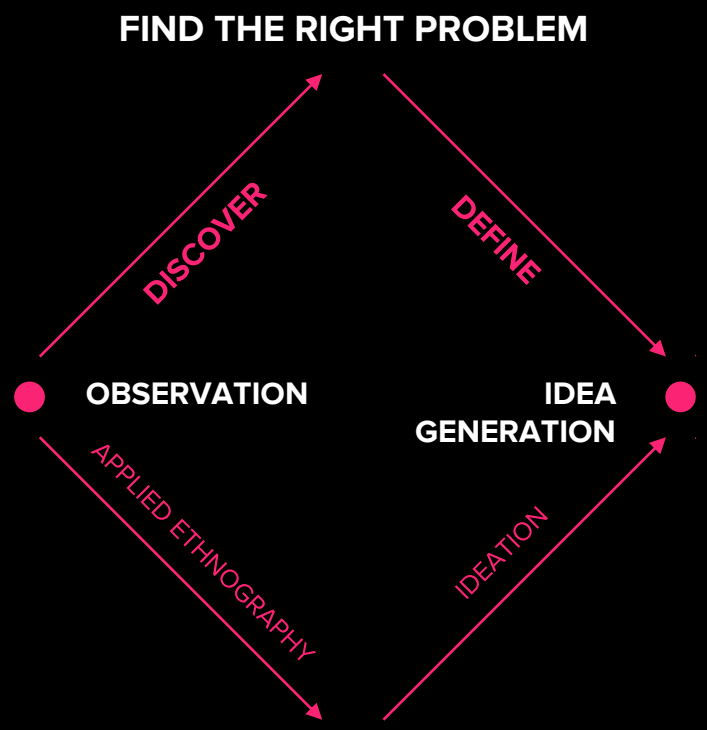
HUMAN CENTRED DESIGN PROCESS



* FROM DESIGN COUNCIL UK

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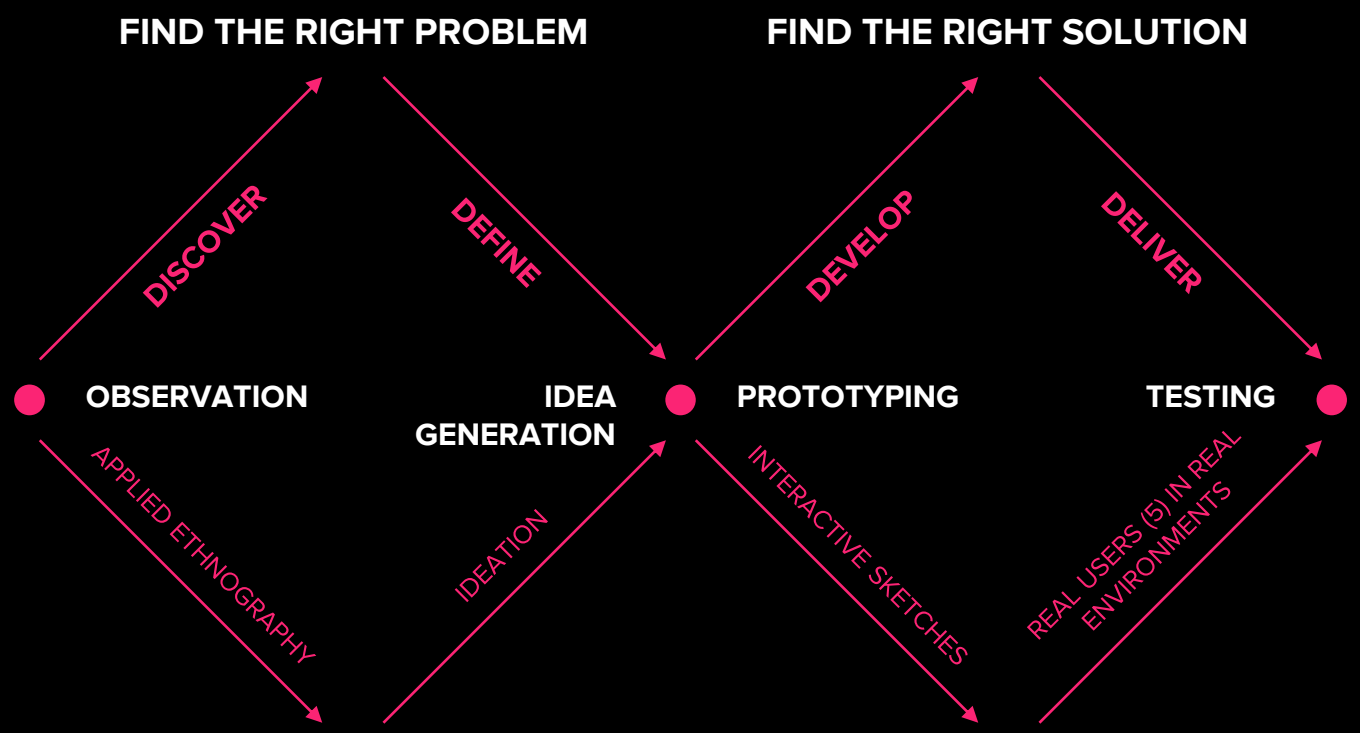
HUMAN CENTRED DESIGN PROCESS



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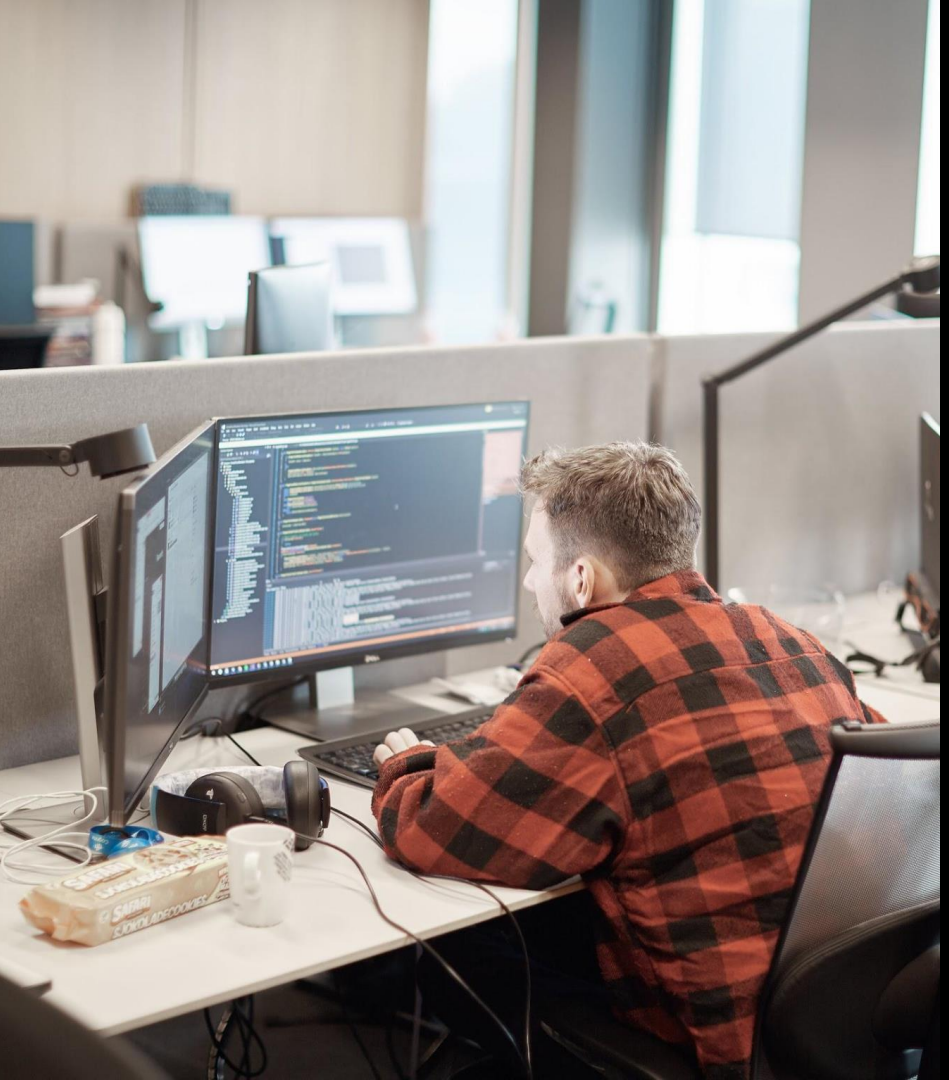

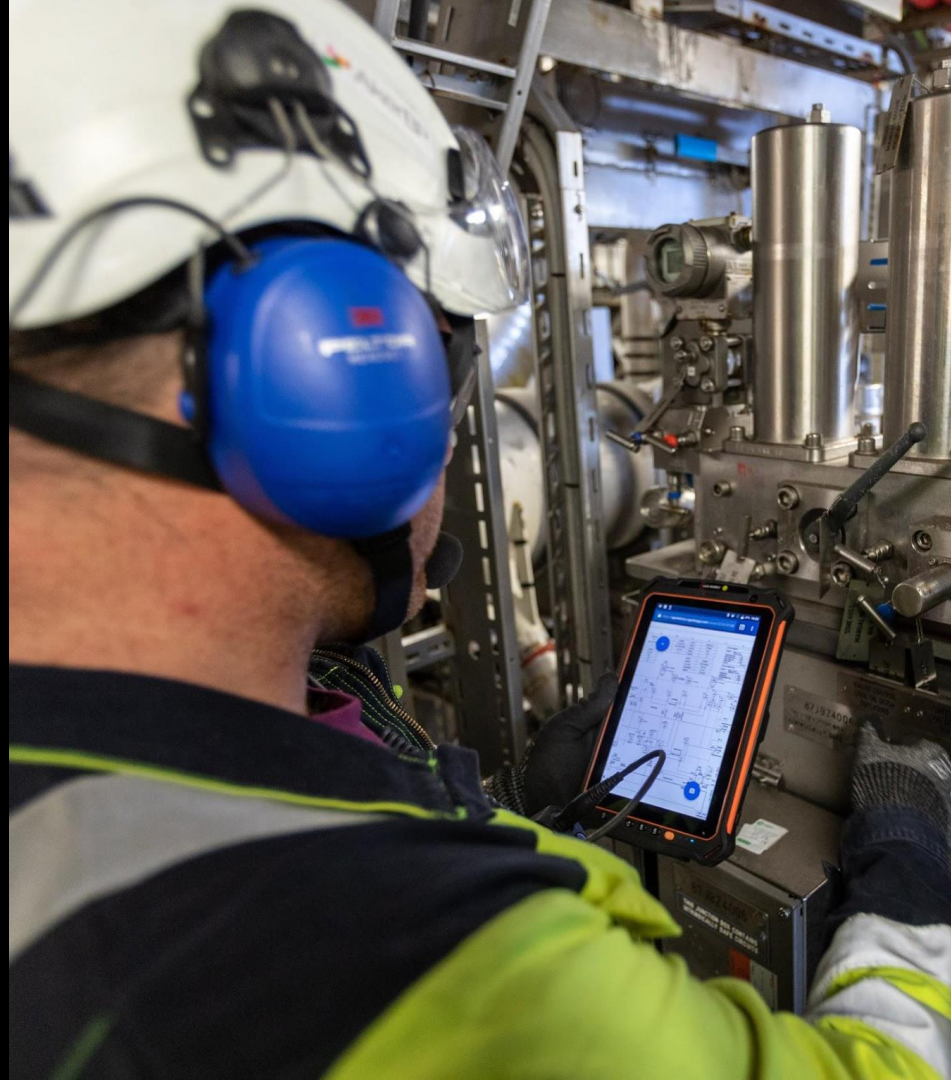

THANK YOU

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