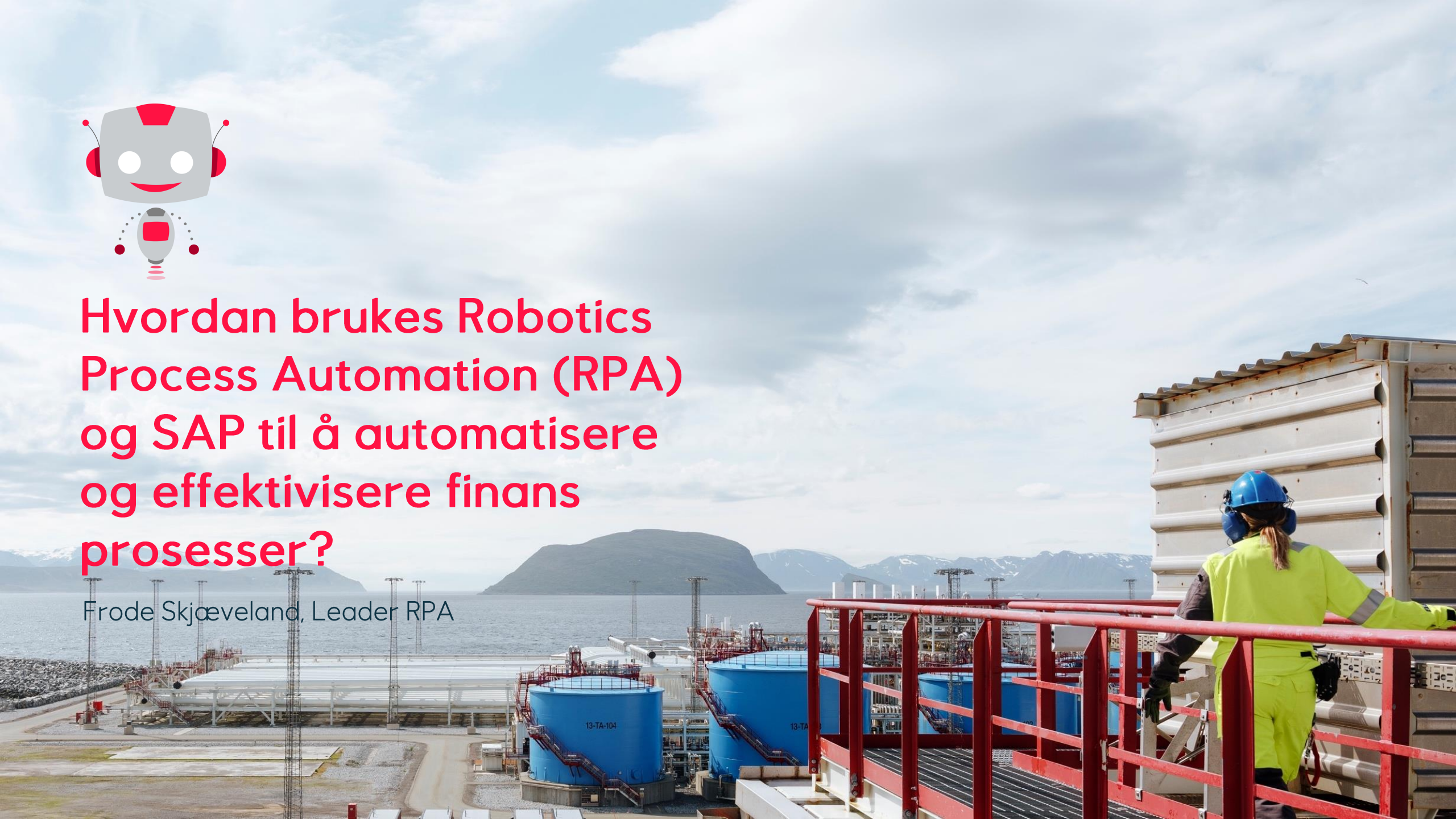


Hvordan brukes Robotics Process Automation (RPA) og SAP til å automatisere og effektivisere finansprosesser?

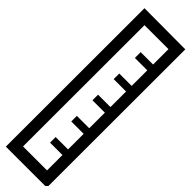
Frode Skjæveland, Leader RPA



RPA @ Equinor



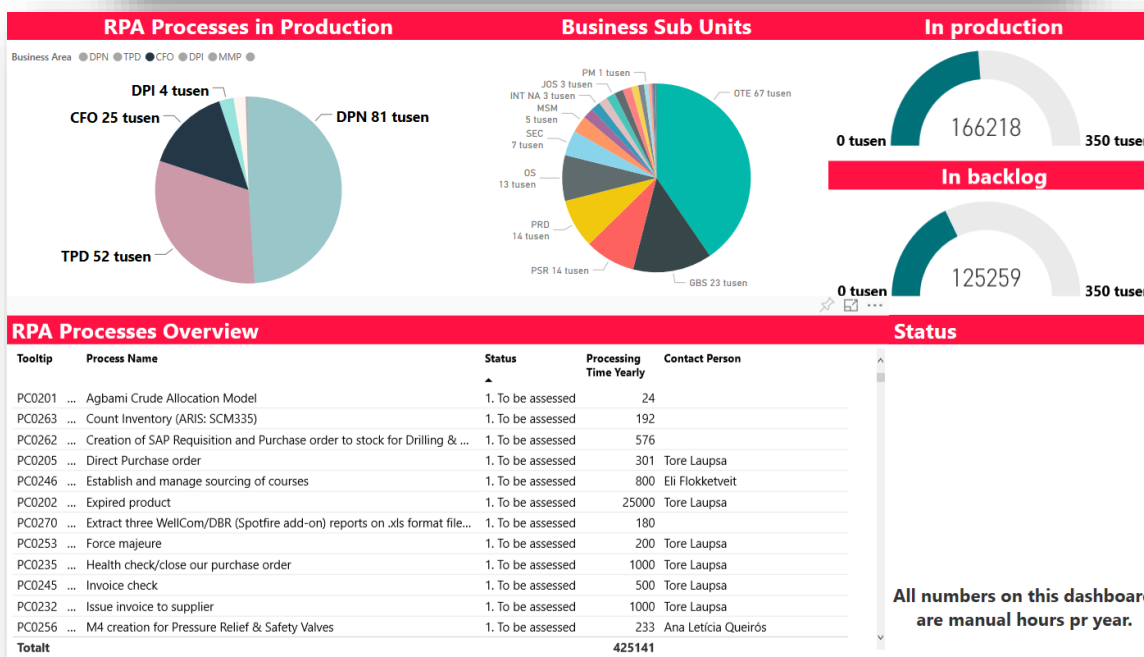
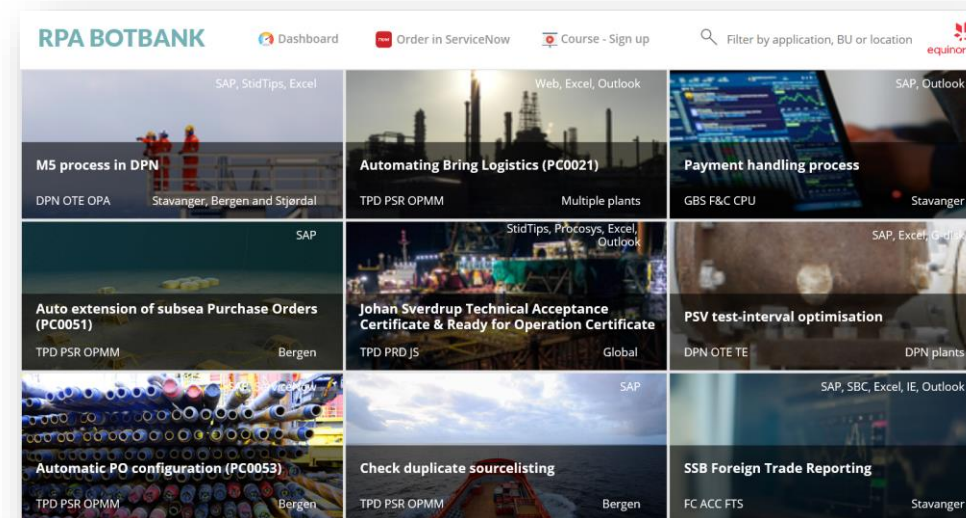
- Vi leverer hele tjeneste spekteret innen RPA til hele selskapet.



- 10 FTE, Ekstern partner leverer utviklingsressurser
- 300 prosesser er evaluert, 100 i produksjon.
- 166.218 manuelle timer automatisert



- Tjenesten har vært tilgjengelig i 3,5 år
- Utviklingstid pr robot (kost) er ca 10-20 uker.



Hva er RPA / Hvorfor bruke det?



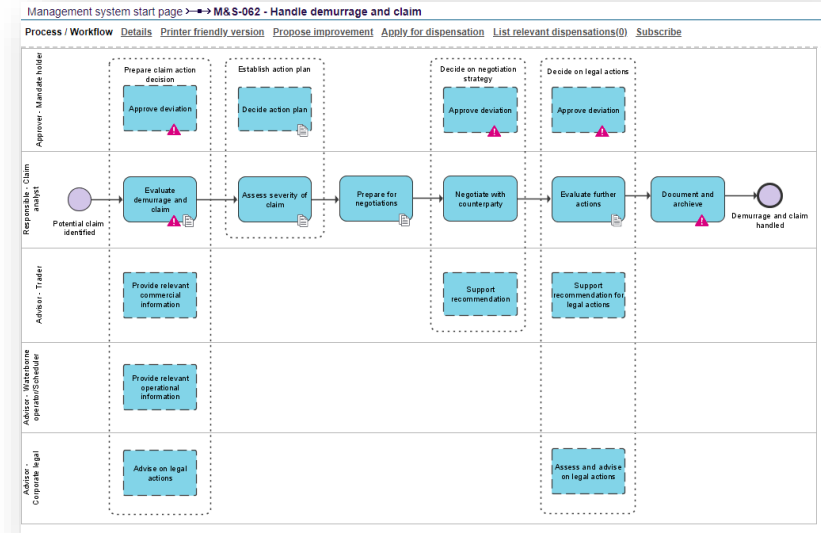
Hva

- **Robotic Process Automation** er en teknologi som brukes for å automatisere arbeidsprosesser på tvers av IT applikasjoner.
- «Invented in finance»

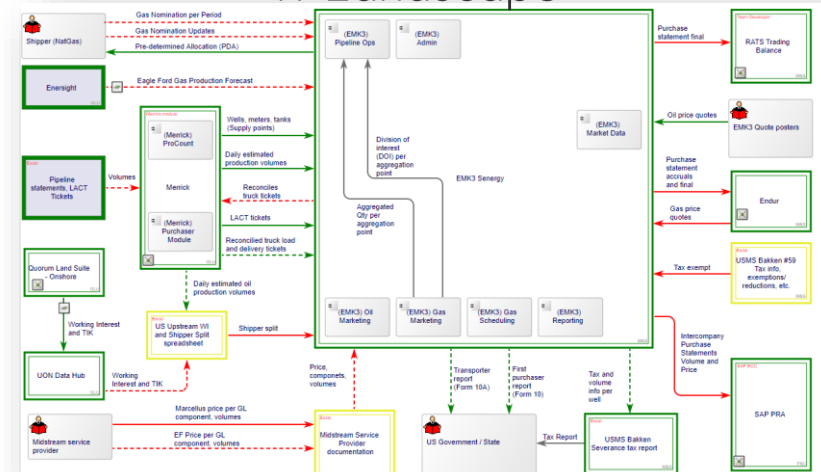
Hvorfor

- Automatisere trivielle oppgaver, frigjør timer til andre oppgaver
- Relativt hurtig implementeringstid
- Relativt enkelt å forstå

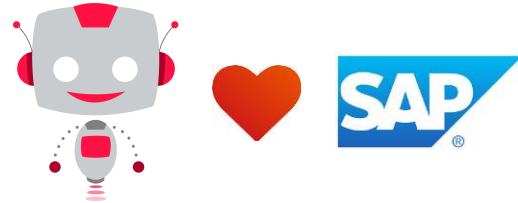
Work Process



IT Landscape

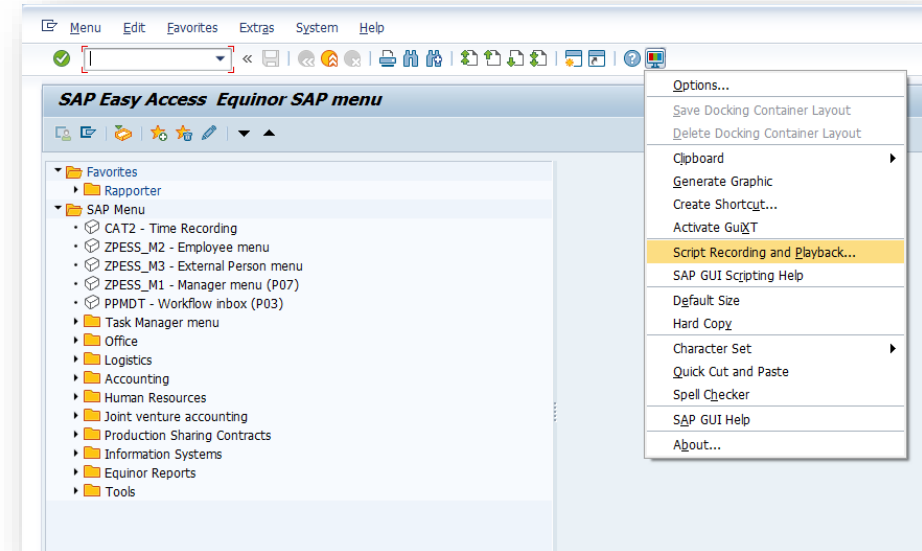


RPA & SAP



- RPA interagerer veldig bra med SAP (SAP Scripting, Winshuttle)
- RPA interagerer veldig dårlig med SAP Netweaver
- 70-80% av prosessene involverer SAP
- Robottene bruker samme SAP roller* som øvrige ansatte (SoD control)

* Unntak: O&M roller



```

If Not IsObject(application) Then
    Set SapGuiAuto = GetObject("SAPGUI")
    Set application = SapGuiAuto.GetScriptingEngine
End If
If Not IsObject(connection) Then
    Set connection = application.Children(0)
End If
If Not IsObject(session) Then
    Set session = connection.Children(0)
End If
If IsObject(WScript) Then
    WScript.ConnectObject session, "on"
    WScript.ConnectObject application, "on"
End If
session.findById("wnd[0]").resizeWorkingPane 172,22,false
session.findById("wnd[0]/usr/ctrlIMAGE_CONTAINER/shellcont/shell/shellcont[0]/shell").selectedNode = "0000000006"
session.findById("wnd[0]/usr/ctrlIMAGE_CONTAINER/shellcont/shell/shellcont[0]/shell").doubleClickNode "0000000006"
session.findById("wnd[0]/tbar[1]/btn[37]").press
session.findById("wnd[0]/tbar[1]/btn[38]").press
session.findById("wnd[0]/tbar[1]/btn[39]").press
    
```

«Intelligent» automatisering

- Kombinasjonen av RPA og intelligente tjenester kan være veldig sterk
 - Kombinere legacy systemer med nye tjenester
 - Prototyping kan gjøres raskere
 - API (interne og eksterne) med tilhørende autentiseringsmekanismer understøttes av RPA

ABBYY®

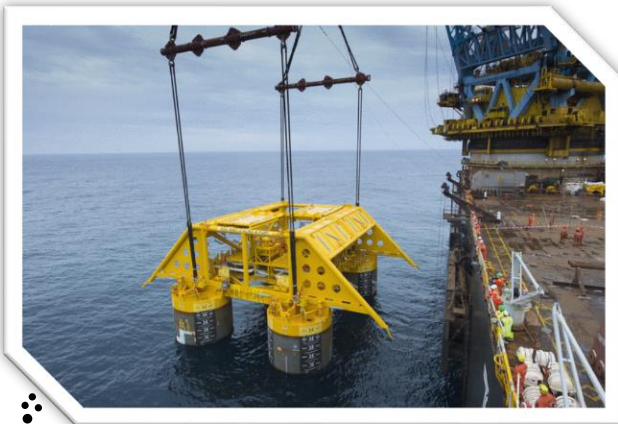
CASES



 Month end closing



 Prosessering av produksjons rapporter



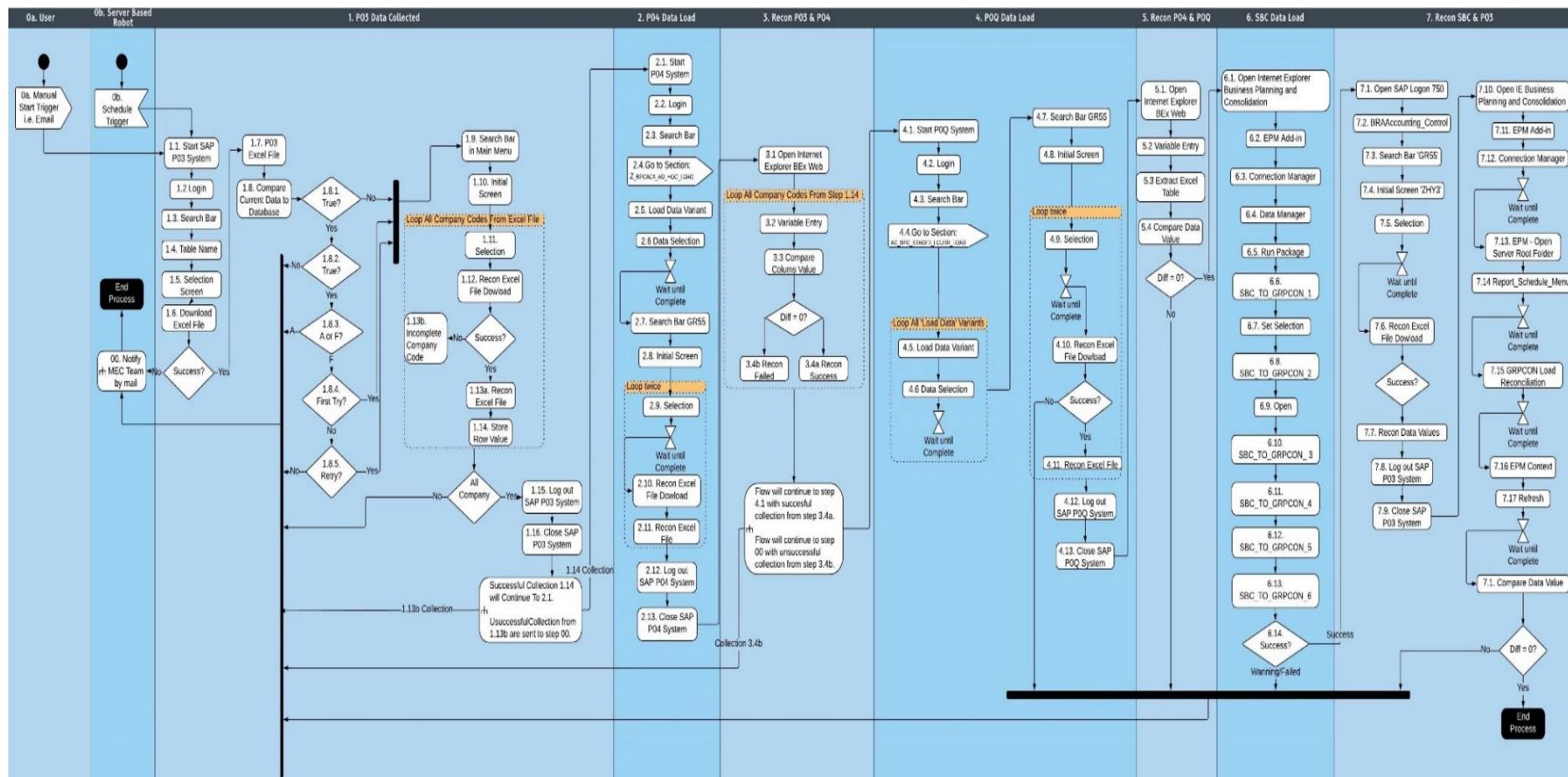
 Faktura verifikasjon



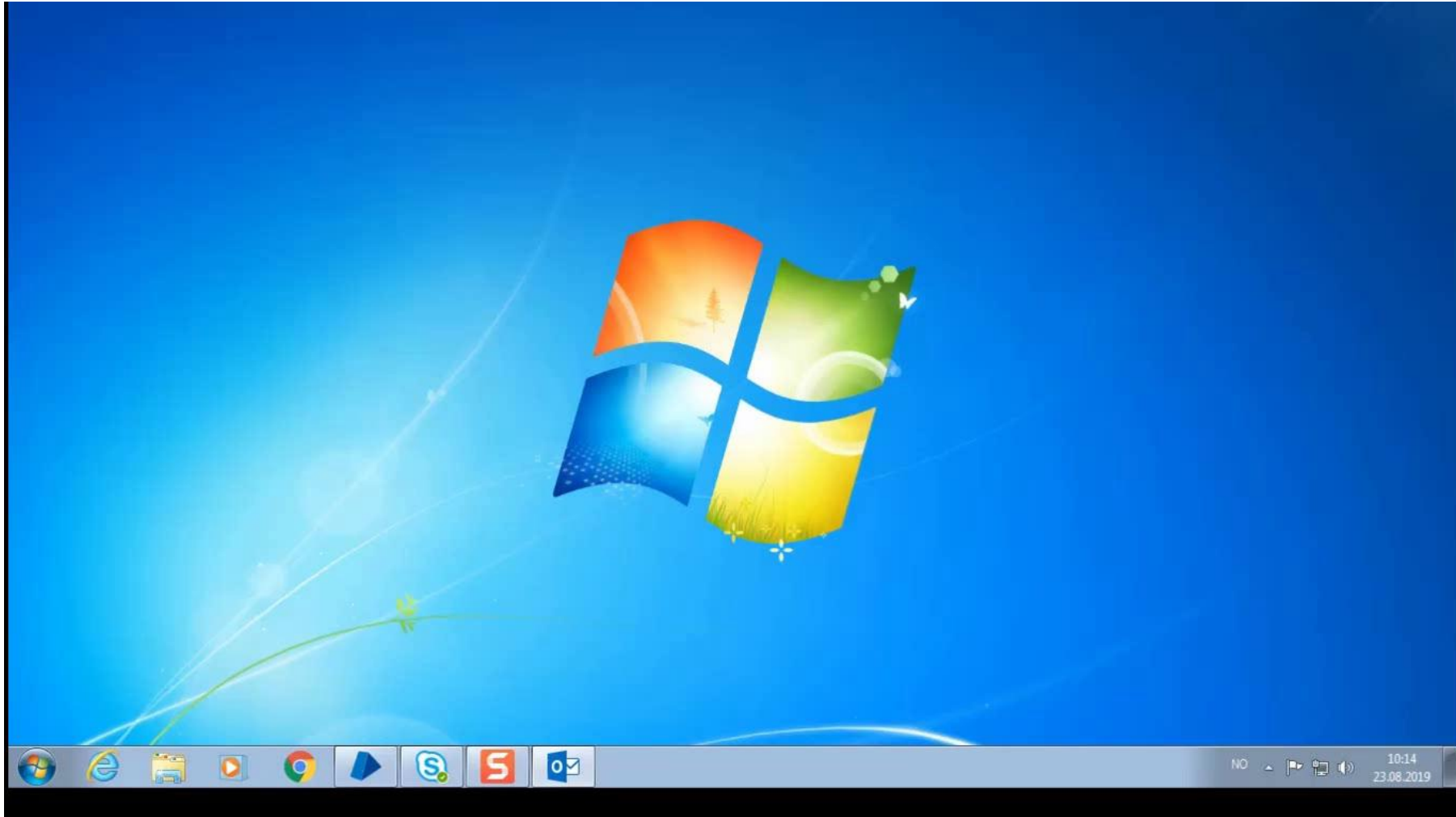
 Prosessering av plant statements

Month end closing

- 4 systemer
- 200 company codes
- Må startes om natten
- 400-800 timer pr måned



Month end closing

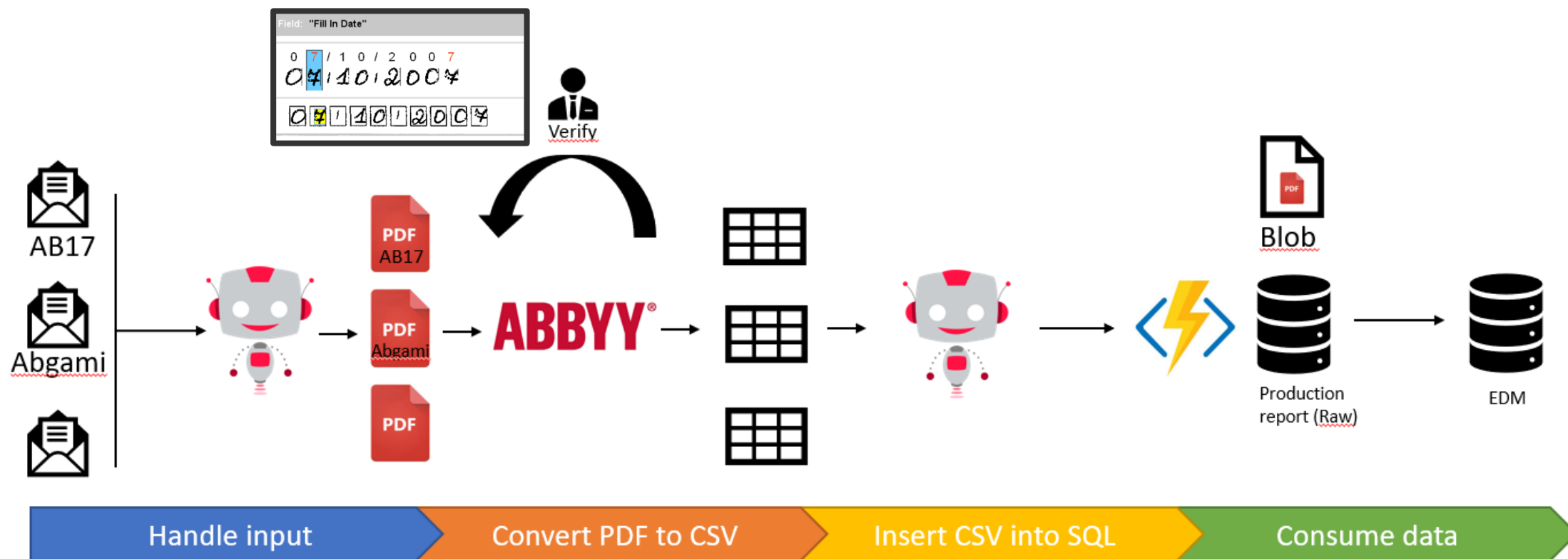


Prosessering av produksjons rapporter

- 11 Partner operated assets (international)
- Daily production reports received as PDF's
- All operators have invented their own reporting format.
- Manual data entry, 5 excel sheets, ...

kw_WaterInjectionWells											
Water Injection Wells											
Well Name	Production Day	Hours on	Choke Open (%)	Well Head Pressure (psia)	F/L (psia)	Well Head Temp (deg F)	Metered Volume (bbls)	Allocated Volume (bbls)	Month Cumulative (bbls)	Year Cumulative (bbls)	Comments
Water Injection Wells	Production Day	Hours On	Choke Open (%)	Well Head Pressure (psia)	F/L	Well Head Temp (deg F)	Metered Volume (bbls)	Allocated Vol.	Month Cumulative	Year Cumulative	Comments
AGB-04st1	06/20/19	0	0.0	1,769	7,379	39	0	0	0	5,430	
AGB-05	06/20/19	24	15.9	4,541	7,168	113	38,557	38,557	733,762	5,144,352	
AGB-08	06/20/19	0	0.0	1,301	7,418	39	0	0	0	1,128,724	
AGB-09	06/20/19	0	0.0	1,564	7,869	38	0	0	0	2,262,687	
AGB-21	06/20/19	0	0.0	2,247	7,805	40	0	0	0	2,225,578	
AGB-22	06/20/19	0	0.0	2,310	7,300	40	0	0	0	3,261,594	
AGB-30	06/20/19	0	0.0	1,347	7,199	40	0	0	0	2,966,504	
AGB-32	06/20/19	24	4.0	3,014	7,351	104	13,719	13,719	78,379	2,498,526	
AGB-34	06/20/19	0	0.0	2,170	7,780	39	0	0	0	1,709,435	
AGB-39	06/20/19	24	19.6	6,335	7,174	106	32,585	32,585	637,109	4,944,221	
kw_GasInjectionWells											
Gas Injection Wells											
Well Name	Production Day	Hours on	Choke Open (%)	Well Head Pressure (psia)	F/L (psia)	Well Head Temp (deg F)	Metered Volume (mscf)	Allocated Volume (mscf)	Month Cumulative (mscf)	Year Cumulative (mscf)	Comments
Gas Injection Wells	Production Day	Hours On	Choke Open (%)	Well Head Pressure (psia)	F/L	Well Head Temp (deg F)	Metered Volume (mscf)	Allocated Vol.	Month Cumulative	Year Cumulative	Comments
AGB-13	06/20/19	24	13.8	3,954	4,992	104	76,140	76,140	1,440,503	11,109,601	
AGB-15	06/20/19	24	17.0	4,238	4,559	110	52,755	52,755	1,220,611	8,089,071	
AGB-18	06/20/19	24	17.8	4,100	4,565	110	107,132	107,132	2,041,531	17,520,101	
AGB-23B	06/20/19	24	22.7	3,890	4,548	110	95,872	95,872	1,866,596	16,479,604	
AGB-36	06/20/19	24	24.0	4,768	4,935	101	55,816	55,816	1,312,663	10,389,512	
kw_CommentsTable											
Comments											
Comment											
*Agb-44 SCM change-out completed; Agb-44 BOL SIS testing on PMD-1 completed.											
*SWIP #1 online; SWIP#2, #3, #4 & #5 unavailable.											
*LP Comp #2 offline due to elevated vibration on electric motor; OH Compressor #2 offline due to stuck Comp. rotor; VRU#2 offline due to excessive lube oil loss; and passing											
PV-480002 at gas injection suction header.											
*Flare is due to the reasons above.											
*Commenced AGB-947 cargo offload to M/T 'FRONT EMINENCE' @ 1636hrs 20 June 2019.											

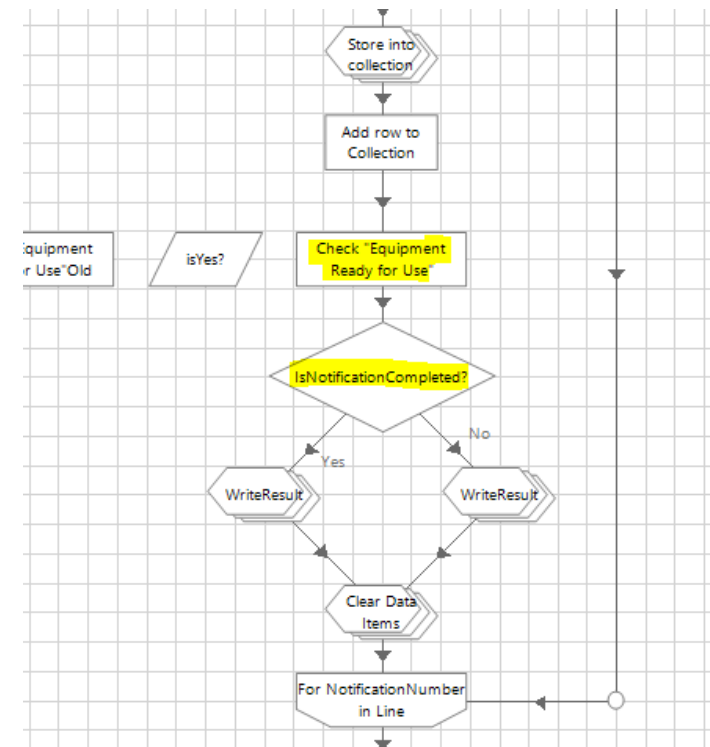
Prosessering av produksjons rapporter



Faktura verifikasjon

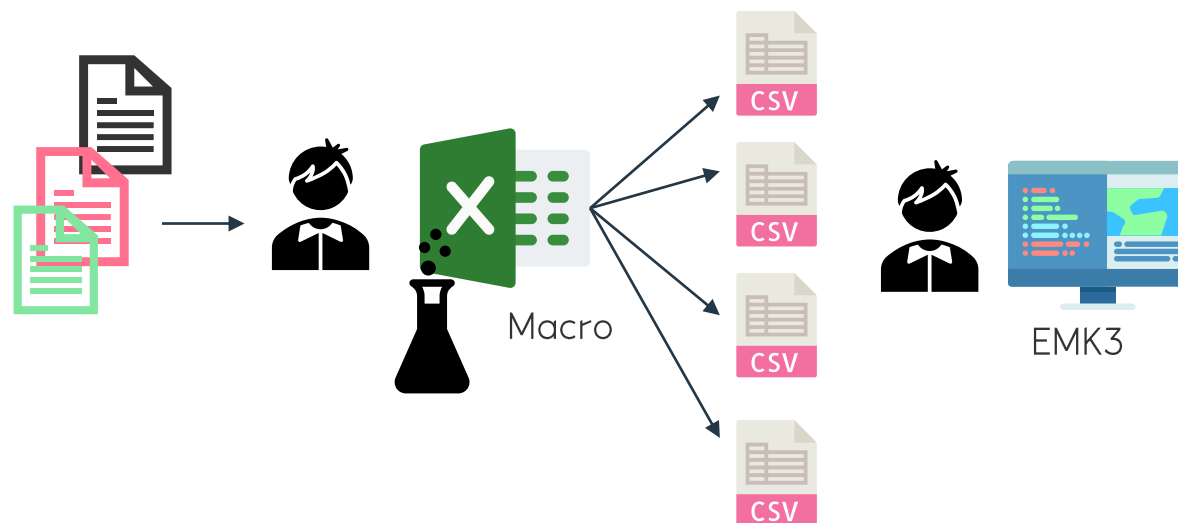
- Utfordrende rolle: Invoice approver
- Ulik verifikasjon, avhengig av kontrakttype og varer

The image shows a screenshot of an FMC Technologies invoice. The table contains multiple columns with headers such as 'Line', 'Description', 'Quantity', 'Unit', 'Price', 'Amount', 'Tax', 'Total', 'Status', 'Comments', 'Contract', 'Order', 'Invoice', 'Payment', 'Currency', 'Date', 'Time', 'User', 'IP', 'Location', 'Status', 'Comments', 'Contract', 'Order', 'Invoice', 'Payment', 'Currency', 'Date', 'Time', 'User', 'IP', 'Location'. A red rectangular box highlights the 'Status' column, which contains various status codes like 'PENDING', 'APPROVED', 'REJECTED', 'CANCELLED', 'PAID', 'INCOMPLETE', 'COMPLETED', 'ON HOLD', 'SUSPENDED', 'TERMINATED', 'RENEWED', 'AMENDED', 'REVOKED', 'RESERVED', 'LOCKED', 'UNLOCKED', 'ARCHIVED', 'UNARCHIVED', 'PUBLISHED', 'UNPUBLISHED', 'DRAFT', 'FINAL', 'REVISION', 'CORRECTION', 'UPDATE', 'DELETE', 'CREATE', 'EDIT', 'VIEW', 'PRINT', 'EXPORT', 'IMPORT', 'COPY', 'PASTE', 'CUT', 'DELETE', 'REDO', 'UNDO', 'FIND', 'REPLACE', 'COPY', 'PASTE', 'CUT', 'DELETE', 'REDO', 'UNDO', 'FIND', 'REPLACE'.



Prosessering av plant statements

- US Onshore, processing plants.



TARGA
TPL SOUTHTEX PROCESSING CO LP

Operator Name: [Redacted]
Operator ID: [Redacted]
Contract No: [Redacted]
Contract ID: [Redacted]

PERCENT OF PROCEEDS STATEMENT

Lease & Contract Information

Lease/Contract Information	Production Date	Lease Name	Allocation Decimal	Meter Number	Suffix	State	County	Contract Number
SILVER OAK	1/2017	KDR-TALISMAN	0.635398	2008067	B	TX	KARNES	80002

Settlement Summary

Settlement Summary	Base	Residue	Liquid	Gross	Fees & Adjustments	Tax	Tax Reimbursement	Net Value
14.65	0	0.00	7,098.52	7,098.52	558,755.63	0.00	0.00	-551,655.11

Liquid Settlement

Liquid Settlement	Allocated Gallons	Shrink Mcf	Shrink MMBTU	Contract	Settlement Gallons	Price	Liquid Value
ETHANE	1,823,966	1,515,432	56,989	100.00	1,515,432.35	0.00000	0.00
PROPANE	702,447	683,008	24,933	100.00	683,007.93	0.00000	0.00
ISOBUTANE	205,685	202,420	6,221	100.00	202,419.99	0.00000	0.00
NORMAL BUTANE	221,813	220,534	7,035	100.00	220,533.75	0.00000	0.00
NATURAL GASOLINE	217,119	205,339	5,359	100.00	205,338.99	0.00000	0.00
FLD CONDENSATE	217,119	7,519	190	95.00	7,142.80	0.99380	7,098.52
TOTAL	3,387,549	2,834,252	100,728		2,833,875.68		7,098.52

Residue Allocation

Residue Allocation	Contract	MMBTU	Type	MMBTU	Value
Plant Shrink	100,537	229,284	Allocated Residue	505,668	516,897
Plant Fuel Flare	6,576	6,792	Residue Returned	0	0
Theoretical Residue	988,934	1,027,746	Net Residue	505,668	516,897

Residue Settlement

Residue Settlement	Contract	Contract %	Settlement Residue	Price	Residue Value
Residue	100.0000		510,104	0.0000	0.00

Fees & Adjustments

Fees & Adjustments	Base	Rate	Value
GATHERING 2	750807.09	0.28746	215827.01
Processing	750807.09	0.29268	219746.22
Residue Sale	510104.38	0.15680	79984.37
CO2 Treating	601770.99	0.00000	0.00
Electricity Fee	750807.09	0.05753	43136.03

Analysis

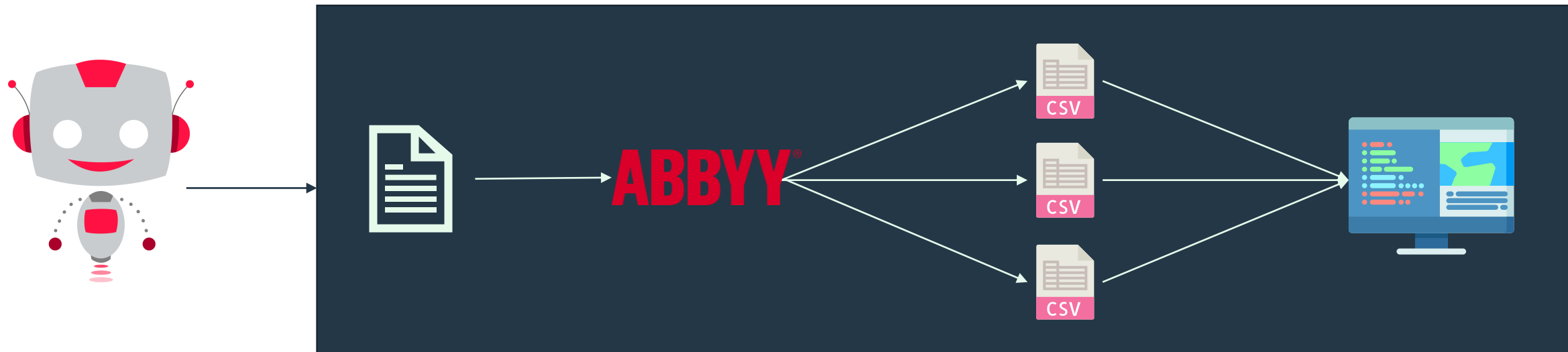
Analysis	Mcf	GPM
Methane	81.1622	13.6812
Nitrogen	0.0408	
Carbon Dioxide	0.0560	
Other Gases	0.0000	
Ethane	11.3559	0.0380
Propane	4.2467	1.1873
Isobutane	1.0469	0.3418
Normal Butane	1.1719	0.3680
Isopentane	0.4148	0.1513
Normal Pentane	0.2569	0.0929
Hexane	0.0000	0.0000
Heptane	0.0000	0.0000
Octane Plus	0.2819	0.1166
TOTAL	100.0000	18.9497

Plant Contacts

Primary	Phone #	Email	Name	Phone #	Email
			SEEDS TARGA RESOURCES CO		
			SEEDS TARGA RESOURCES CO		
			SEEDS TARGA RESOURCES CO		

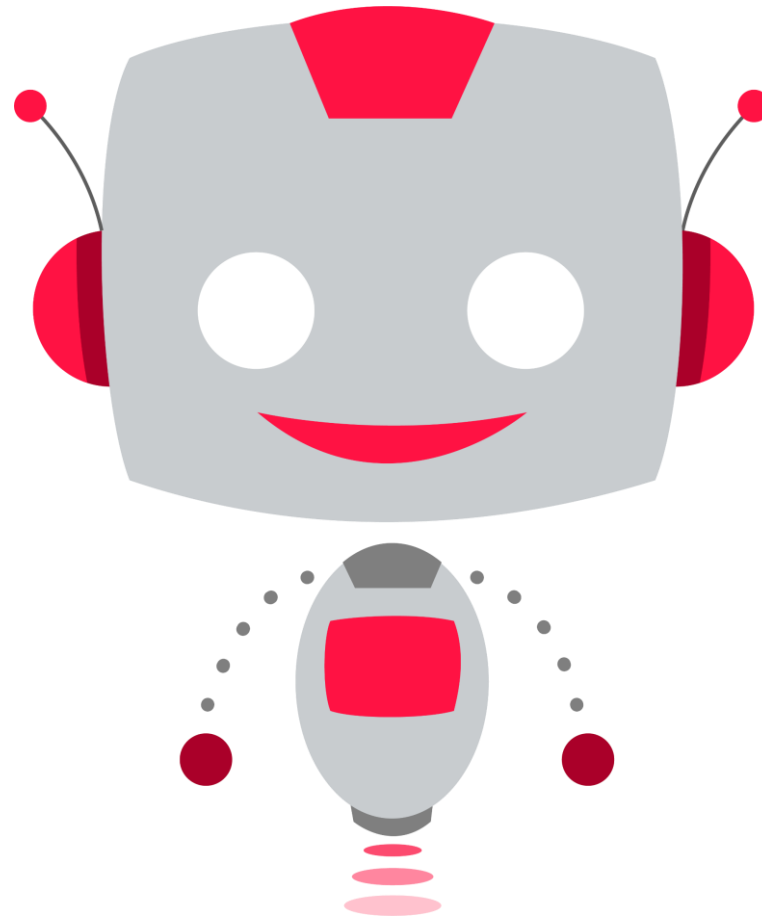
Comments

Prosessering av plant statements



Live demo

Questions?



Hvordan brukes Robotics Process Automation (RPA) og SAP til å automatisere og effektivisere finans prosesser?

Frode Skjæveland, Leader CFO GBS SSV IIC RPA

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