

Enterprise Asset Management in the Facility Industry



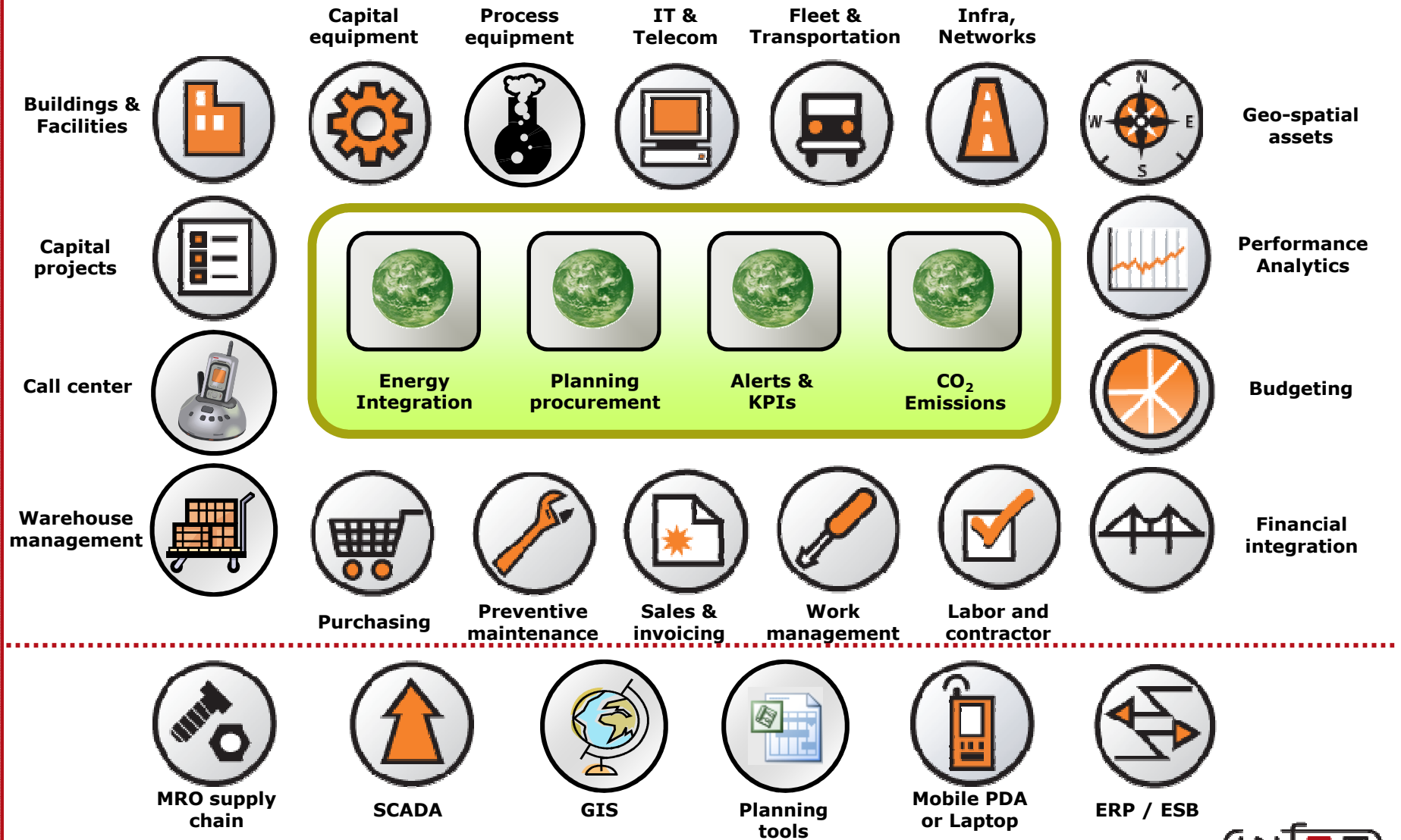
Sameer Makhija
Intertec Systems LLC

Infor EAM Business Drivers

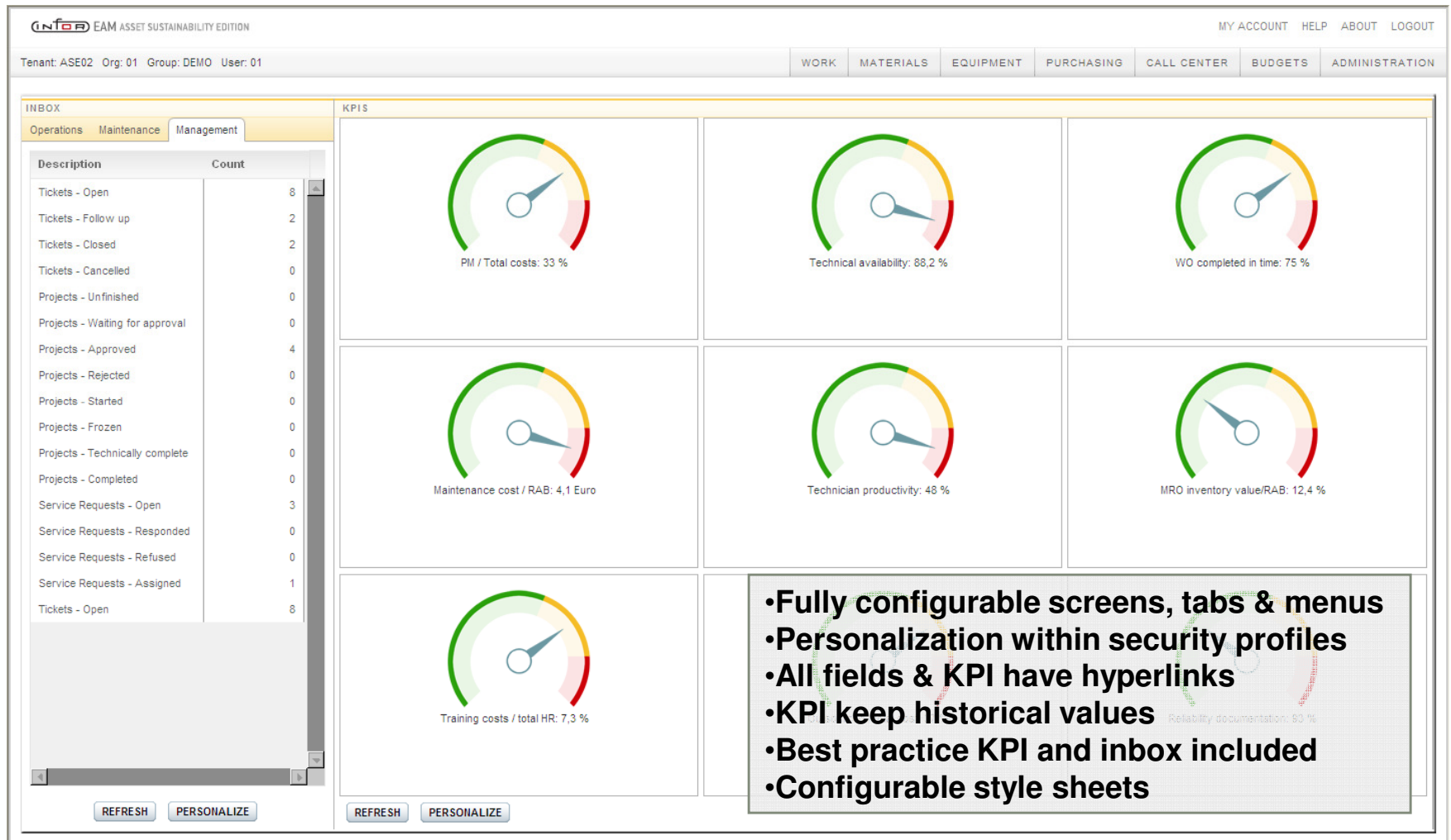
- **Asset Utilization**
 - Equipment Performance, Equipment Availability, Product Quality
- **Cost Control**
 - Labor, Material, Tools
- **Resource Allocation**
 - Skills, Inventory Management, Procurement
- **Compliance**
 - Environmental, Safety, Health
- **Sustainability**
 - Energy management for assets
 - CO₂ + GHG reduction
- **Customer management**
 - Call Center & Self service
 - Contracts, Sales & Invoicing



Infor EAM Product Footprint



Infor EAM - Home Page



Infor EAM – Assets Management

Infor EAM - Microsoft Internet Explorer

EAM ASSET SUSTAINABILITY EDITION

START CENTER MY ACCOUNT HELP ABOUT LOGOUT

Demo for Airpro - Org: 01 - Group: DEMO - User: 01

WORK MATERIALS EQUIPMENT PURCHASING CALL CENTER BUDGETS ADMINISTRATION

Asset: AIST-0043 Airstarter AP43

Organization: 01
Department: TS
Status: Installed

List View Record View Comments Events Costs PM Schedules Structure Addresses Depreciation Meters Warranties Documents Parts Associated Previewer

Asset: AIST-0043 Airstarter AP43
License #: NMX-31
Department: TS

Organization: 01
Status: Installed
State: Good
Out of Service: ☐

EQUIPMENT DETAILS

Class: AIST
Category: AIST/GARRET-VW
Cost Account: 220300
Controlled by: FRANK

Commission Date: 01-JAN-1992
Transfer Date:
Sold/Scrap Date:
Meter Unit: km

HIERARCHY

Parent Asset:
Location: EFHK

TECHNICAL SPECIFICATION

Year: 1992
Power: Gasoline / Jet

TRACKING DETAILS

Manufacturer: GARRET
Serial Number: VV923KLZ065421
Supplier: CARPOINT

Model: Transporter
Revision: 1.0
Purchase Value: 75,000.00

FLEET MANAGEMENT DETAILS

Vehicle: ☒
Fleet Customer: INT

Vehicle Status: Available
Issued To:

FINANCIAL / LEGAL

Own Property: ☒
Type of Lease: n/a
Leasing Company:
Contract Ends:

Insurance Company: EXPERT
Vehicle Insurance: IF202
Voluntary Insurance: IF203

- Landside as well as Airside Assets
 - Buildings, Retail Outlets, Jetways, Bridges, Shuttles, Fleet, Airstarters, Runways, Lighting, High Loaders, Communications, Utilities etc etc
- Unlimited and multiple hierarchies
- Detailed history and cost analysis
- Serialized assets inventory & transactions
- Preventive & Predictive maintenance
- Warranty & Claim management
- Depreciation cost and book value



Infor EAM – Attachments

Infor EAM - Microsoft Internet Explorer

EAM ASSET SUSTAINABILITY EDITION

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WORK MATERIALS EQUIPMENT PURCHASING CALL CENTER BUDGETS ADMINISTRATION

Asset: AIST-0043 Airstarter AP43

Organization: 01
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List View Record View Comments Events Costs PM Schedules Structure Addresses Depreciation Meters Warranties Documents Parts Associated Previewer

Preview pictures

Picture 1 of Airstarter AP43

Picture 1 of Airstarter AP43

Picture 3 of Airstarter AP43

Picture 4 of Airstarter AP43

View picture details - Microsoft Internet Explorer

View picture detail

- Attachments of any kind & file format
- Import from / Export to MS Excel
- Interactive CAD drawings interface
- Copy to work orders & print on job card

Infor EAM – GIS & Linear Assets

Infor EAM - Windows Internet Explorer

EAM ENTERPRISE EDITION

Tenant: DEMOEE Org: ORG1 Group: R5 User: R5

WORK GRIDS MATERIALS EQUIPMENT PURCHASING OPERATIONS ADMINISTRATION

GIS Map Search

MAP SEARCH

Search For: Address

Street: RUNWAY A06

Zone: OMAN AIRPORT

Dataspy: All Equipment

Buffer Layer: Manhole

GIS Filter: All Features

Radius: 1,000 Meters

SEARCH CLEAR

EQUIPMENT WITHIN SEARCH AREA

--No Filter--

Equipment	Description	Organization	Status	Department	Class	Con
10196	SWS manhole GIS Tag # 223333 (private)	ORG1	Installed	*	Manhole GIS Profile Class	04/0
10197	SWS manhole GIS Tag # 223323 (city)	ORG1	Installed	*	Manhole GIS Profile Class	04/0
10198	SWS manhole GIS Tag # 223339 (private)	ORG1	Installed	*	Manhole GIS Profile Class	04/0
10250	SWS manhole GIS Tag # 223365 (private)	ORG1	Installed	*	Manhole GIS Profile Class	04/0
10273	SWS junction box GIS Tag # 223373 (city)	ORG1	Installed	*	Manhole GIS Profile Class	04/0

Options: Highlight on Map SUBMIT

676000 680000 684000

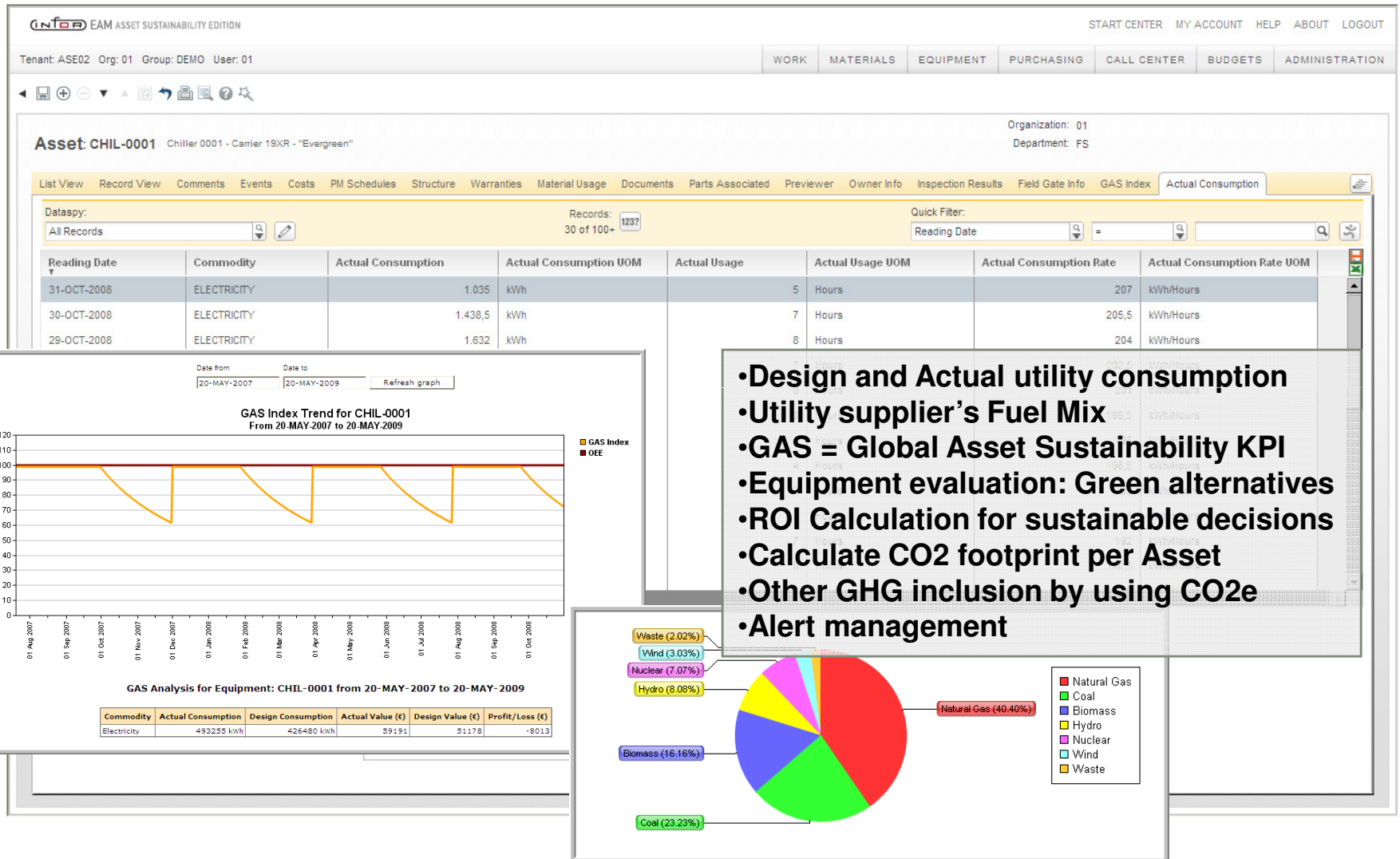
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- Bi-directional interface with ESRI ArcGIS
- Out of the Box geographic information
- Assets and Attributes synchronization
- Linear assets & work orders for runways
- Dynamic segmentation for history & cost



Infor EAM – Asset Sustainability



Infor EAM – Maintenance Planning & Forecasting

Infor EAM ASSET SUSTAINABILITY EDITION START CENTER MY ACCOUNT HELP ABOUT LOGOUT

Tenant: ASE02 Org: 01 Group: DEMO User: 01 WORK MATERIALS EQUIPMENT PURCHASING CALL CENTER BUDGETS ADMINISTRATION

PM Forecasting Session ID: 10021

Parameters Preview **Forecasting**

Dataspy: My view Page: 1 of 1 Records: 1-6 of 6 Quick Filter: Equipment Begins with

PM EQUIPMENT **FORECASTING DETAILS**

Equipment	Description	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
		Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue
PURO-0001	Screw Pump - Sulzer Model A	12W							1W							1W							1W						4W		
PURO-0002	Screw Pump - Sulzer Model A		1W							12W							1W							1W							
PURO-0003	Screw Pump - Sulzer Model A	1W						1W								12W						1W							1W		
PURO-0004	Screw Pump - Sulzer Model A			1W							1W							1W				12W			1W						
PURO-0005	Screw Pump - Sulzer Model A			1W							1W							1W					12W			1W				12W	
PURO-0006	Screw Pump - Sulzer Model A				1W							1W							1W							1W					

- Periodic maintenance routines
- Calendar, Meter or Condition based
- Drag and drop forecast capability

Infor EAM – Job Scheduling

INFOR EAM ASSET SUSTAINABILITY EDITION START CENTER MY ACCOUNT HELP ABOUT LOGOUT

Tenant: ASE02 Org: 01 Group: DEMO User: 01 WORK MATERIALS EQUIPMENT PURCHASING CALL CENTER BUDGETS ADMINISTRATION

Work Order Scheduling

DAILY SCHEDULE

Work Order	Activity	Trade	Scheduled Hours	Status	Scheduled Date	Employee	Shift
10941	1	ELE	4	Assigned	27-MAY-2009	CLINT	
12546	1	ELE	4	Approved	27-MAY-2009	CLINT	

Organization: 01
Schedule By: Employee
Employee: CLINT
Auto Refresh: ☒

CALCULATE AVAILABILITY

Delete Schedule | Change WO Status

ACTIVITIES

Datasp: Backlogged ELE
Filter: Work Order Begins with

Work Order	Description	Status	Activity	Estimated Hours	Hours Remaining	Latest Scheduled Date	Trade
10939	Yearly Pump Inspection	Assigned	1	4	4	07-MAY-2009	ELE
10940	Yearly Pump Inspection	Assigned	1	4	4	07-MAY-2009	ELE
11782	Yearly Pump Inspection	Approved	1	4	4	07-MAY-2009	ELE
					0	07-MAY-2009	ELE

May 2009

REFRESH

Datasp: Electricians only Records: 2 of 2

Trade	Name	Monday	Tuesday	Wednesday	Thursday
ELE	Clint Eastwood		WO11620 (4 Hours) WO11298 (4 Hours) Total: 8 Hours	WO11816 (8 Hours) Total: 8 Hours	WO11827 (4 Hours) WO12494 (2 Hours) WO12495 (2 Hours) Total: 8 Hours
ELE	Spike Lee		WO10939 (4 Hours) WO10940 (4 Hours) Total: 8 Hours	WO11782 (4 Hours) WO11850 (3 Hours) Total: 7 Hours	WO12493 (0 Hours) WO12496 (4 Hours) WO10937 (4 Hours) Total: 8 Hours

•Drag and drop Job Scheduler
•Employee or Team/Crew assignment
•Creates personnel calendars
•Alerts possible through email notification
•2-way integration with MS Project



Infor EAM – Fleet & Fuel Management

Infor EAM ASSET SUSTAINABILITY EDITION START CENTER MY ACCOUNT HELP ABOUT LOGOUT

Tenant: ASE02 Org: 01 Group: DEMO User: 01 WORK MATERIALS EQUIPMENT PURCHASING CALL CENTER BUDGETS ADMINISTRATION

Fleet Vehicle Ticket: 10000 Fleet Cust. Org.: 01
Status: Issued
Vehicle: TRUCK-0021

List View Record View Comments Exceptions Billing Adjustments

Ticket: 10000 Ticket Status: Issued Fleet Customer: KONZUM
Ticket Type: Pool Fleet Cust. Org.: 01
Vehicle: TRUCK-0021 Scania Tractor 0021 Date Created: 15-OCT-2008 10:26
Received Vehicle: Created By: 01
Issued to: STEVE Issued By: 01
Cost Code: 220300 Other: Phone No.: 555 - 887274 Returned To:
Completed Date/Time:

ISSUE DETAILS	RETURN DETAILS	CUSTOM FIELDS
Issued Fuel Level: 0,5	Returned Fuel Level:	
Issued Parking Location: Behind the HQ B uilding	Returned Parking Location:	
Issued Mileage: 0	Returned Mileage:	
Issued Date/Time: 15-OCT-2008 10:25	Returned Date/Time:	
Est. Return Date/Time: 31-OCT-2008 10:25		

LAST PM DETAILS	NEXT PM DETAILS
Last Work Order:	Next Work Order: 11062
Last PM:	Next PM: TRUCK/S/10K
Last Date Completed:	Next Due Date: 15-OCT-2008
Last Meter Reading:	Next Meter Reading:

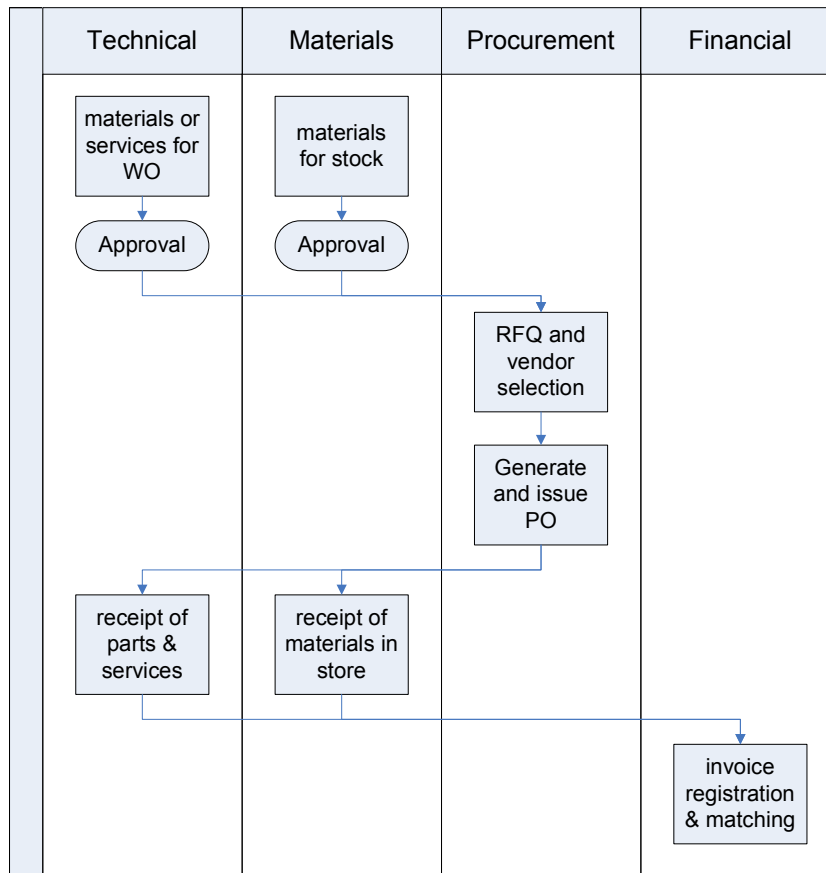
BILLING DETAILS
Billing Code:
Markup Code:

Assignment Billing

- Fleet maintenance
- Vehicle Tickets & Billing
- Mileage tracking
- VMRS reporting + data templates
- Fuel consumption & cost tracking
- Depot, Tank, Pump management
- Fuel inventory transactions



Infor EAM – Procurement & Inventory



Example workflow

- Configurable workflows
- Blanket Orders for parts and services
- Contracts for discount rules
- RFQ / Quotations management for parts and services
- Stock management transactions
 - Issues / Returns
 - Stock Counts & Revaluations
 - Receipts with or without PO
 - Returns to Supplier
 - Repair tracking (internal/external)
 - Store to Store, Bin to Bin
- FIFO / LIFO possible
- (serialized) Asset procurement
- Utility Bills for Sustainability
- EOQ calculation, ABC analysis

Infor EAM – Customers & Call Center

Infor EAM ASSET SUSTAINABILITY EDITION START CENTER MY ACCOUNT HELP ABOUT LOGOUT

Tenant: ASE02 Org: 01 Group: DEMO User: 01 WORK MATERIALS EQUIPMENT PURCHASING CALL CENTER BUDGETS ADMINISTRATION

Call Center

List View Record View Comments WO Comments Documents

Find Customer By: Address that contains

KNOWLEDGE BASE SEARCH

CUSTOMER INFORMATION: KATJA SCHUURMAN +31 10 2064700

Name: Katja Schuurman

Company Name: Infor Global Solutions

Address 1: Rivium Boulevard 214

City: Capelle a/d IJssel Zip Code: 2909 LK

Primary Phone: +31 10 2064700 Secondary Phone: +31 10 2064701

Primary E-mail: katja.schuurman@demo.infor.com

Notes:

ACTION REQUEST: REPAIR A/C UNIT WO: 11640

Work Address: Rivium Boulevard 214

Equipment: ED-200382138 Al-Jazeera Primary Boys School

Department: TP

Service Problem Code: FAC-AIRCO-REP Repair A/C Unit

Work Order: 11640 WO Class:

WO Priority: High WO Class Org:

Standard WO: REP-AIRCO Temporary Fix Promise Date: 30-NOV-2008 10:37

Permanent Fix Promise Date: 02-DEC-2008 09:37

REMARKS

Organization: 01

Customer Request: 10003

Status: Open

Source: Phone

Type: Information

Class:

Assigned To:

BULLETIN BOARD 19-MAY-2009

Top 10 KB Articles

Bulletin Board

CUSTOM/WO CUSTOM FIELDS

- Find or add new callers for incident
- Use knowledge base for first line support
- Create follow-up work orders
- Identify trouble asset using GIS
- Library of Service Problem Codes (SPC)
- Service delivery matrix links SPC to asset and service provider
- Bulletin board for messages to operator

Infor EAM – Advanced Reporting

AIRPORT SERVICES

KPI (In-service Details)

Start Date: 2006-11-01T00:00:00.000

End Date: 2006-11-29T00:00:00.000

In Service Details								
Equipment Class	Class and desc	Equipment	Equipment Description	Out of service time(Days)	Number of days	Operational Hours	% Uptime	Performance
PBB	PASSENGER LOADING BRIDGE	PBB/AH/G32	PASSENGER BOARDING BRIDGE GATE 32-AH TERM C GATE 32	0.25	28	504	98.78%	Acceptable
PBB	PASSENGER LOADING BRIDGE	PBB/AH/G33	PASSENGER BOARDING BRIDGE GATE 33-AH TERM C GATE 33	0.18	28	504	99.15%	Acceptable
PBB	PASSENGER LOADING BRIDGE	PBB/AH/G36	PASSENGER BOARDING BRIDGE TERM C GATE 36	1.28	28	504	93.91%	Unacceptable
PBB	PASSENGER LOADING BRIDGE	PBB/AH/G37	PASSENGER BOARDING BRIDGE GATE 37-AH TERM C GATE 37	0.32	28	504	98.48%	Acceptable
PBB	PASSENGER LOADING BRIDGE	PBB/AH/G38	PASSENGER BOARDING BRIDGE GATE 38-AH TERM C GATE 38	0.00	28	504	99.90%	Acceptable
PBB	PASSENGER LOADING BRIDGE	PBB/AH/G39	PASSENGER BOARDING BRIDGE GATE 39-AH TERM C GATE 39	0.00	28	504	100.00%	Acceptable
PBB	PASSENGER LOADING BRIDGE	PBB/AH/G41	PASSENGER BOARDING BRIDGE GATE 41-AH TERM C GATE 41	0.82	28	504	96.09%	Requires Attention
PBB	PASSENGER LOADING BRIDGE	PBB/AH/G42	PASSENGER BOARDING BRIDGE GATE 42-AH TERM C GATE 42	0.85	28	504	95.93%	Requires Attention

Dec 12, 2006

- 4 -

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- Advanced Reporting Module
- Run standard EAM Reports
- Create your own PDF, HTML, XLS reports
- Reports scheduler for auto printing
- Interactivity with HTML

FMC Technologies
Airport Services

KPI-0008.01

**KPI Top 5 Cost Equipment per class
Month to Date (ONT)**

Start Date
Dec 01, 2006

End date
Dec 13, 2006

Top	Equipment	Equipment desc	Hours Booked	WO count	Material Cost	Labour Cost	Service Cost	Average Cost	Total value	Performance
1	GPU/DNT/TAG4	GPU Ontario Terminal 4 Gate 4	0.75	2	\$0.00	\$23.16	\$0.00	\$11.92	\$23.16	Requires Attention
2	GPU/DNT/TAG3	GPU Ontario Terminal 4 Gate 3	0.25	1	\$1.36	\$7.72	\$0.00	\$11.92	\$9.08	Acceptable
3	GPU/DNT/TAG1	GPU Ontario Terminal 4 Gate 1	0.55	2	\$0.00	\$7.72	\$0.00	\$11.92	\$7.72	Acceptable
4	GPU/DNT/TAG6	GPU Ontario Terminal 4 Gate 6	0.25	1	\$0.00	\$7.72	\$0.00	\$11.92	\$7.72	Acceptable
Summary			1.80	6	\$1.36	\$46.32	\$0.00		\$47.68	

FMC Technologies
AIRPORT SERVICES

KPI-0001.01.HIST

**KPI (In-service and Response time)
(PBB, PCA, GPU)**

Start Date: Nov 1 2006 12:00 AM

End Date: Nov 29 2006 11:59 PM

In Service Time					
Equipment	# of eqpt. serviced	number of WO	% Uptime	Performance	
GPU GROUND POWER UNITS	111	38	99.74%	Acceptable	
PBB PASSENGER LOADING BRIDGE	57	28	98.88%	Acceptable	
PCA PRE CONDITION AIR UNITS	58	28	99.48%	Acceptable	

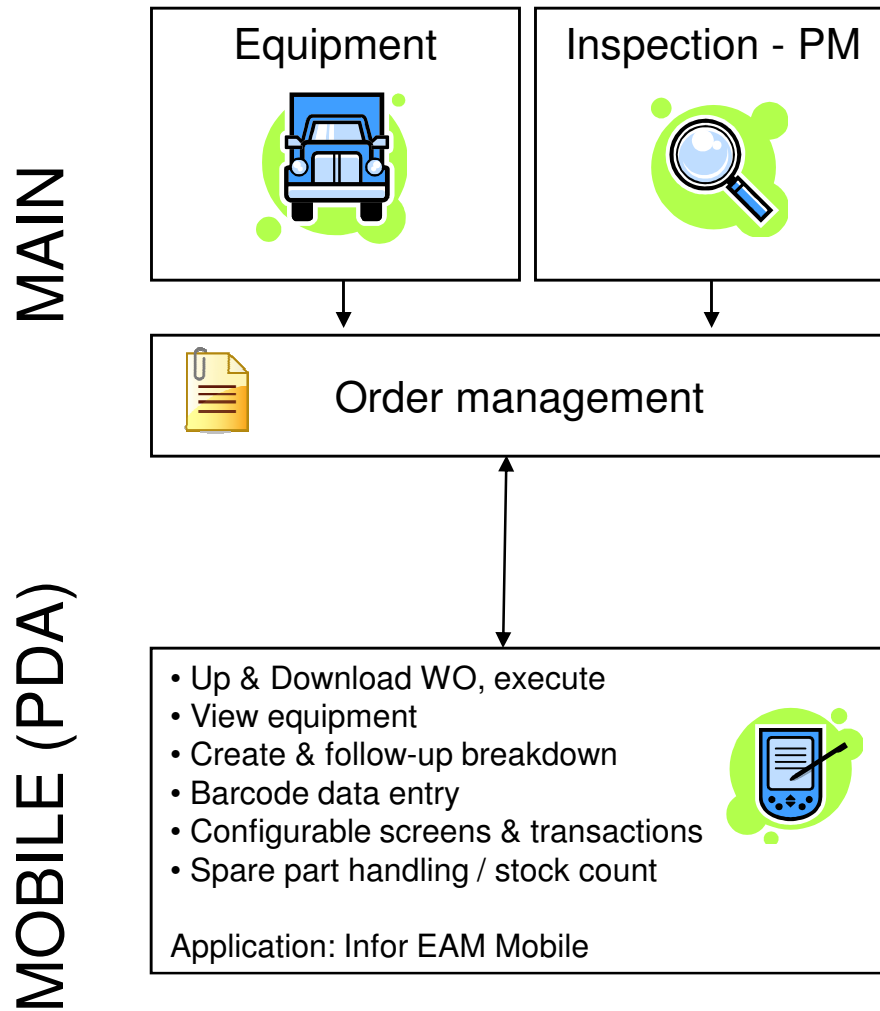
Response Time					
equipment class	# of eqpt. serviced	number of WO	On site time	performance	
GPU	38	73	4 minutes 39 seconds	Acceptable	
PBB	52	103	5 minutes 7 seconds	Acceptable	
PCA	50	85	3 minutes 11 seconds	Acceptable	
Summary	140	257	Average On site time: 4 minutes 27 seconds		

Average Cost	Total value	Performance
\$30.88	\$61.76	Requires Attention
\$30.88	\$23.16	Acceptable
\$30.88	\$7.72	Acceptable
	\$92.64	

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INFOR

Infor EAM - Mobility



- **Runs on Windows Mobile**
- **1/4 VGA resolution, also VGA for laptops**
- **Wide area wireless**
 - CDPD, CDMA, GPRS
 - Anything that supports TCP/IP
- **Local area wireless**
 - Wifi, Bluetooth, etc.
- **Internationally localized**
- **Local MSSQL CE Database**
- **Online and Offline capability**
- **Auto synchronization when online**



Infor EAM - Summary

■ Powerful

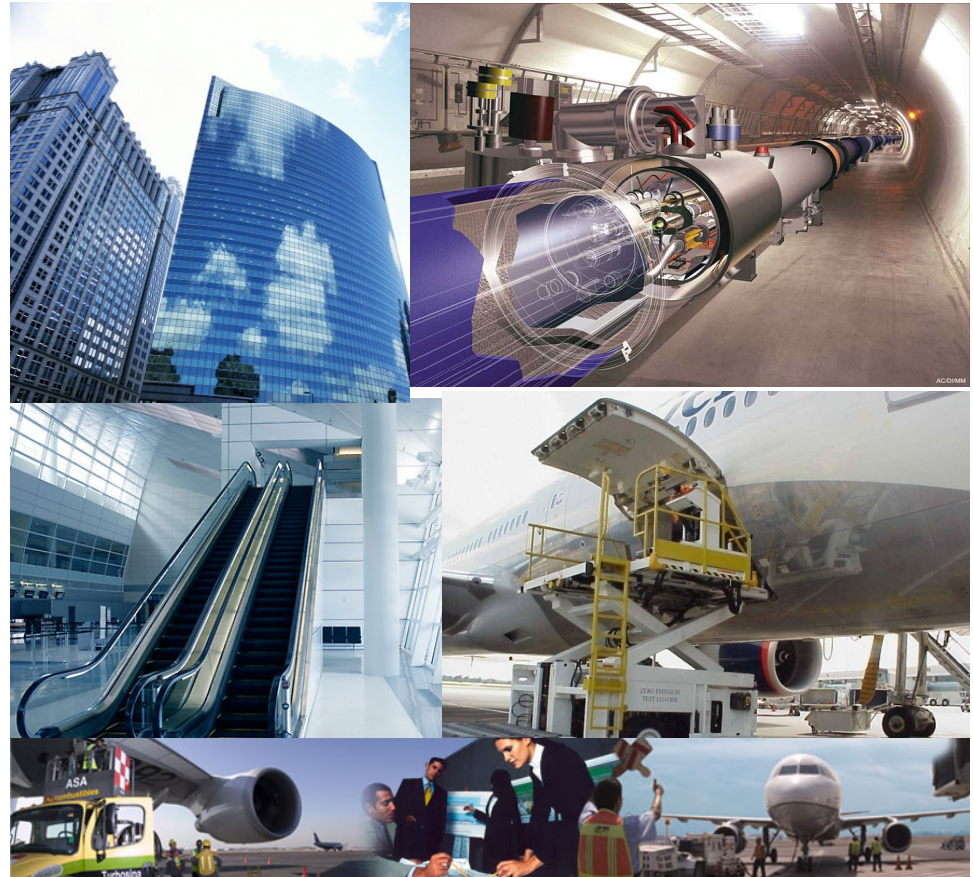
- Complete operational support for the facility industry
- Functionality for meeting regulatory guidelines
- Advanced reporting and analytical capabilities
- Zero footprint web technology
- Asset Sustainability integrated

■ Flexible

- Easy to navigate and personalized home page
- Multi-organization
- Messaging, Alerting
- Mobile options
- Configurable screens & processes

■ Proven

- Wide market acceptance
- Gartner's "Leaders" quadrant for EAM
- Measurable ROI



Infor EAM Facility Management Customers & References



DWTC - Dubai World Trade Center, Dubai



- Facility Management for World Trade Center, Exhibition Halls and Convention Center
- Integration with Microsoft Dynamics (Great Plains)
- Incorporated Asset management processes, Preventive Maintenance and Labor costing
- Solution optimizes work order processes, employee utilization and calculation of labor wages

Nakheel Asset Management, Dubai



- Facility Management for Palm Jumeira, International City, Discovery Gardens and other properties
- Integration with Oracle Financials eBS (e-Business Suite)
- Incorporated various modules like project, budget and contract management as well as asset performance management functionality
- Improved service to tenants and efficiency, optimized operational and administrative costs

Infor Worldwide – EAM Customers snapshot

