

fleet management, maintenance, downtime and cost control

A real life scenario

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Mammoet (Middle East, UAE)	1993 - 2001
Fagioli (Houston, TX)	2001 - 2004
ATCO (Aruba, DC)	2004 - 2013
The Works international (Aruba, DC)	2006 - present

Aruba

32 km x 10 km (20 x 6 miles)

100,000 inhabitants

oil refinery 400,000 barrels/day (until it closed in 2013)

Popular holiday destination (250 cruise ship calls/year; 1,000,000 air tourists)

Part of the Kingdom of the Netherlands



ATCO, Aruba Transport Company

Founded in 1949

Started as a container haul company

As of 2004

32 trucks (container, cement, waste, concrete products, vacuum tanks)

Variety of trailers, low boys, earthmoving equipment and 1 crane

30 mechanics

USD 2MM inventory



ATCO, Operations Director (2004)

1st responsibility

Set-up HL&T division

2nd responsibility

Streamline current operations

3rd responsibility

Re-organize Garage / Workshop

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The challenges

Project duration from few hours to few weeks, from 4 different depots (POS)

Multiple brands, DAF, VOLVO, Peterbuild, Kenworth, MACK, Ford

No preventive maintenance program (run until it breaks)

At any given time 15-20% of the fleet under repair

No inventory control, ad-hoc purchasing system (Aruba is an island)

Client satisfaction was questionable

We were unable to grow

The systems

White boards

Spreadsheets

DOS based “solutions”
invoicing
planning

Fleet management, maintenance, downtime and cost control

1. The wish list
2. The sale / promise
3. The reality



The wish list (Statement of Requirements)

We want to know;

- where any of our equipment is at any given time and where it needs to go next
- which equipment is due for service tomorrow, next week, next month
- what is in our inventory (in # and in \$)
- how much each equipment was down and why

We want to be able;

- to generate and send an invoice the day a job or project is finished



IMPOSSIBLE

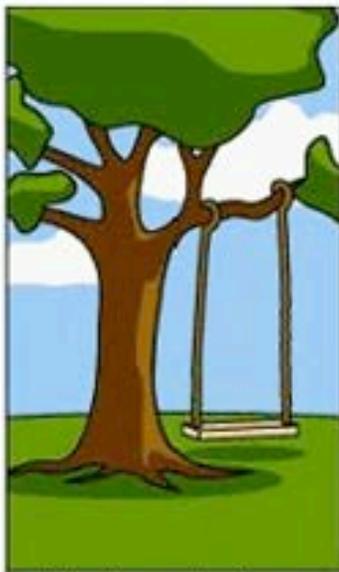
or is it ?

FLEET
COST & CARE
FLEET MANAGEMENT SOFTWARE SOLUTIONS

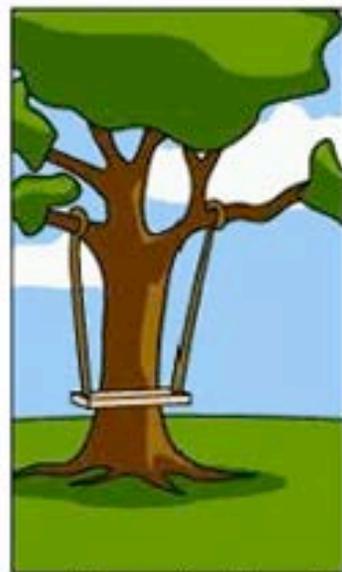
CREATED AND ORGANISED BY
INTERNATIONAL
CRANES
AND SPECIALIZED TRANSPORT



INTERNATIONAL
CRANES &
TRANSPORT
MIDDLE EAST CONFERENCE



What marketing specified



How the project leader understood it



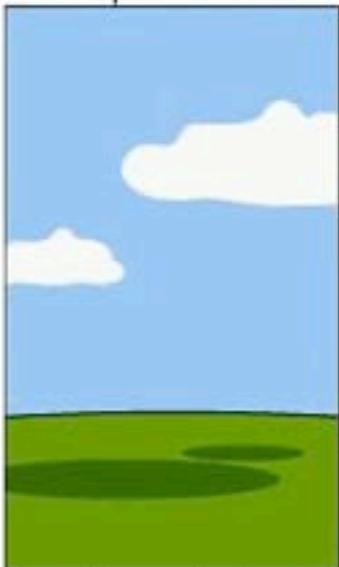
How the engineer designed it



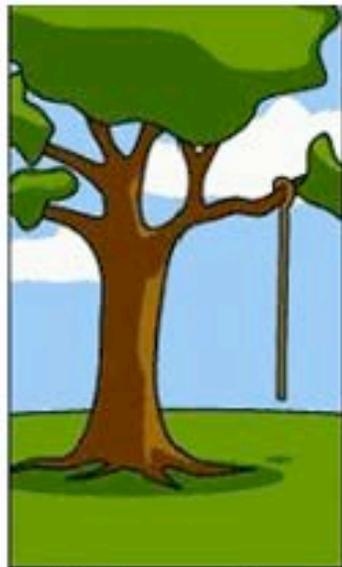
How the programmer wrote it



How the sales executive described it



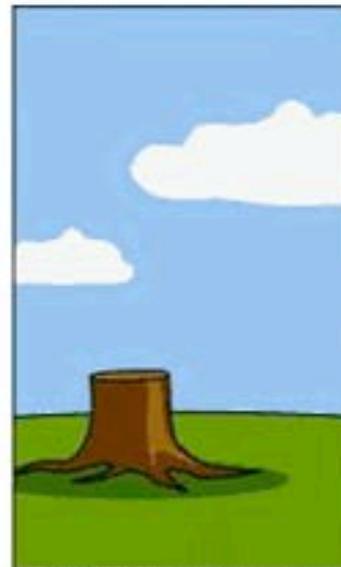
How the project was documented



What operations installed



How the customer was billed



How the help desk supported it

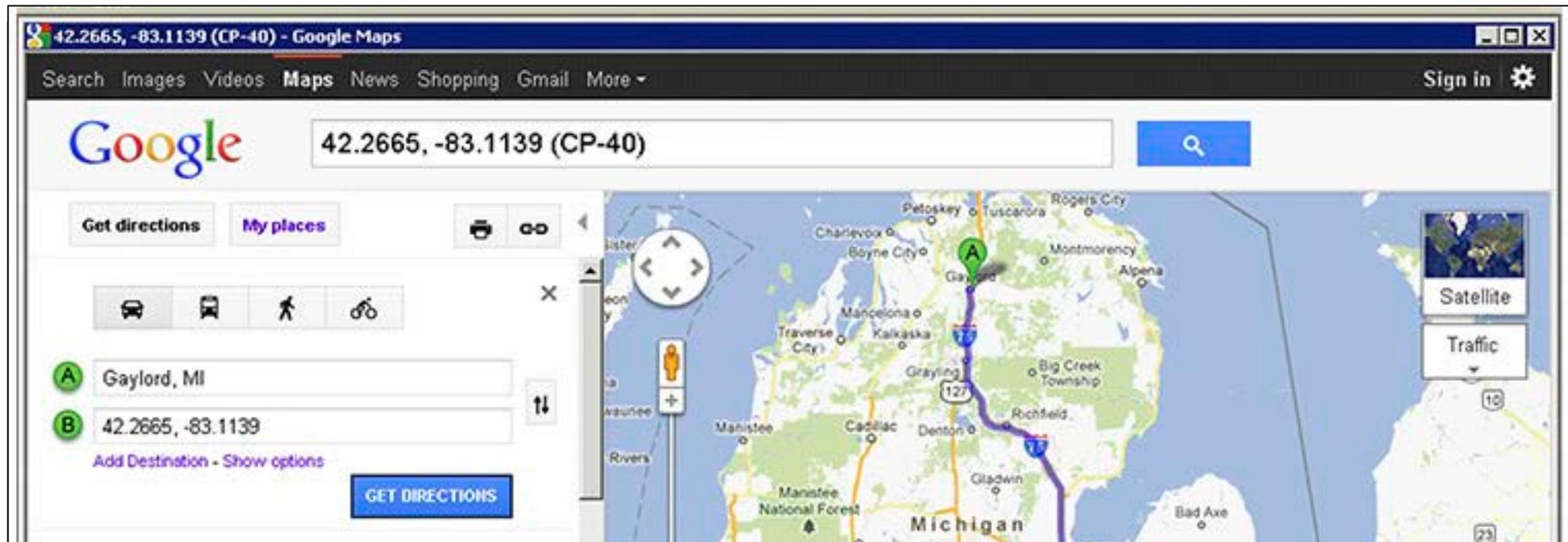


What the customer really wanted

The sale / promise

We want to know;

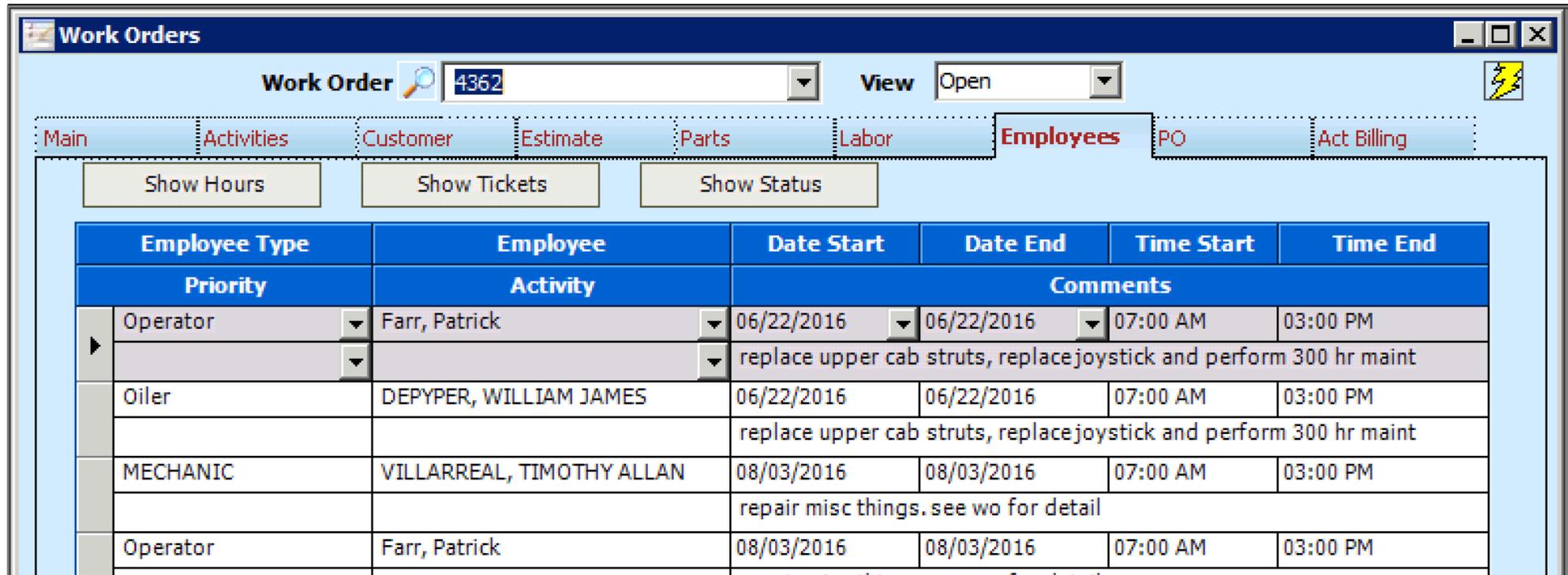
- where any of our equipment is at any given time and where it needs to go next
 - unit schedule
 - job order
 - driver / operator / helper
 - lumpsum / T&M
 - dispatch & routing



The sale / promise

We want to know;

- where any of our equipment is at any given time and where it needs to go next
- which equipment is due for service tomorrow, next week, next month
 - assigned mechanic / technician
 - detailed activity list
 - required parts list



The screenshot shows a software window titled "Work Orders". At the top, there is a search bar for "Work Order" with the value "4362" and a "View" dropdown set to "Open". Below this is a navigation bar with tabs: "Main", "Activities", "Customer", "Estimate", "Parts", "Labor", "Employees", "PO", and "Act Billing". The "Employees" tab is selected. Below the navigation bar are three buttons: "Show Hours", "Show Tickets", and "Show Status". The main content area contains a table with the following data:

Employee Type	Employee	Date Start	Date End	Time Start	Time End
Operator	Farr, Patrick	06/22/2016	06/22/2016	07:00 AM	03:00 PM
		replace upper cab struts, replace joystick and perform 300 hr maint			
Oiler	DEPYPER, WILLIAM JAMES	06/22/2016	06/22/2016	07:00 AM	03:00 PM
		replace upper cab struts, replace joystick and perform 300 hr maint			
MECHANIC	VILLARREAL, TIMOTHY ALLAN	08/03/2016	08/03/2016	07:00 AM	03:00 PM
		repair misc things. see wo for detail			
Operator	Farr, Patrick	08/03/2016	08/03/2016	07:00 AM	03:00 PM

The sale / promise

We want to know;

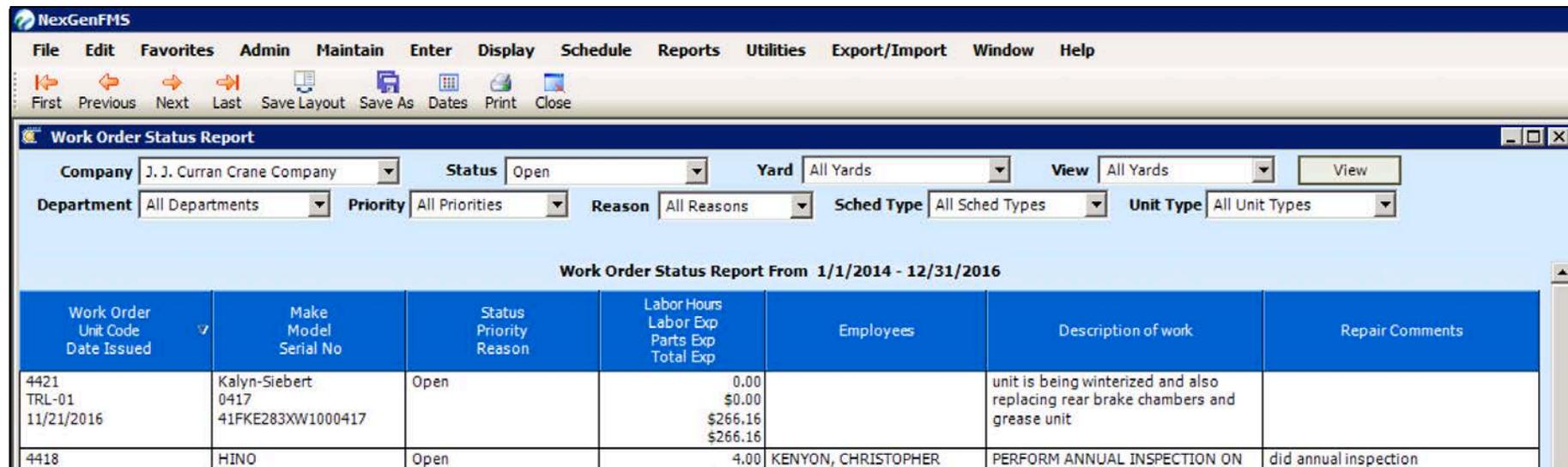
- where any of our equipment is at any given time and where it needs to go next
- which equipment is due for service tomorrow, next week, next month
- what is in our inventory (in # and in \$)
 - part location (yard, bin)
 - last order date and price
 - vendor and alternative vendor (if applicable)
 - minimum reorder quantity (UOM: pair, each, dozen, weight, length etc)

Company <input type="text" value="Fleet Cost & Care"/> Yard <input type="text" value="All Yards"/> New/Used <input type="text" value="New Inventory"/> <input type="text" value="Current"/>						
Retrieve By <input type="text" value="Manufacturer"/> <input type="text" value="Grove"/> <input type="text" value="And"/> Retrieve By <input type="text" value="Location"/> <input type="text" value="A"/> <input type="button" value="View"/>						
11/28/2016 05:47 PM		Fleet Cost & Care Stock On Hand				Total Parts : 12
Manufacturer :Grove And Location :A						
Part No	Description Bin Location	Yard Location	New Quantity	Unit Measure	Cost	New Extension
7437000728	Fuel Filter 2B3	Raleigh A	1.00	Each	0.0000	\$0.00
7486000225	Circular Bubble Level 2B3	Atlanta Yard A	1.00	Each	136.7000	\$136.70
7486100012	Gauge, Oil Level 1D3	Atlanta Yard A	2.00	Each	35.3600	\$70.72
9414100881	Oil Filter 3A4	Raleigh A	1.00	Each	55.4200	\$55.42
GEAR	Gear	Atlanta Yard	0.00	Each	0.0000	\$0.00

The sale / promise

We want to know;

- where any of our equipment is at any given time and where it needs to go next
- which equipment is due for service tomorrow, next week, next month
- what is in our inventory (in # and in \$)
- how much each equipment was down and why
 - report "down" status with labor & part expenses over flexible period
 - who performed the work
 - regular service been carried out ?
 - driver / operator habits



The screenshot displays the NexGenFMS software interface. At the top is a menu bar with options: File, Edit, Favorites, Admin, Maintain, Enter, Display, Schedule, Reports, Utilities, Export/Import, Window, and Help. Below the menu is a toolbar with icons for navigation and actions like First, Previous, Next, Last, Save Layout, Save As, Dates, Print, and Close.

The main window title is "Work Order Status Report". It features several filter dropdowns: Company (J. J. Curran Crane Company), Status (Open), Yard (All Yards), View (All Yards), Department (All Departments), Priority (All Priorities), Reason (All Reasons), Sched Type (All Sched Types), and Unit Type (All Unit Types). A "View" button is also present.

The report title is "Work Order Status Report From 1/1/2014 - 12/31/2016". The data is presented in a table with the following columns:

Work Order Unit Code Date Issued	Make Model Serial No	Status Priority Reason	Labor Hours Labor Exp Parts Exp Total Exp	Employees	Description of work	Repair Comments
4421 TRL-01 11/21/2016	Kalyn-Siebert 0417 41FKE283XW1000417	Open	0.00 \$0.00 \$266.16 \$266.16		unit is being winterized and also replacing rear brake chambers and grease unit	
4418	HINO	Open	4.00	KENYON, CHRISTOPHER	PERFORM ANNUAL INSPECTION ON	did annual inspection

The sale / promise

We want to know;

- where any of our equipment is at any given time and where it needs to go next
- which equipment is due for service tomorrow, next week, next month
- what is in our inventory (in # and in \$)
- how much each equipment was down and why

We want to be able;

- to generate and send an invoice the day a job or project is finished
 - e-sign on the job
 - automatic generation of recurring invoice



The sale / promise

Additional perks

- all information is available on all workstations from a central database
- assigning of rights to each individual user (admin, viewing rights, only dispatch etc)
- accounts payable & receivable
- payroll
- quotations
- purchasing
- client database
- customization (optional)



The reality

We FAILED 3 times with the FCC implementation (**THAT WAS OUR MISTAKE**)

- you have to populate the database with all equipment, parts, clients, employees
- the log-on passwords and rights for each employee need to be assigned
- employees need to know what to do with the overwhelming amount of information available



Within 12 months a change started taking place

- invoices were being sent on time
- vehicle down time reduced (we could actually find our parts in the inventory)
- a huge leap in employee efficiency took place (we stopped doing the same thing multiple times)
- slacking employees could now be identified
- drivers, operators, mechanics started to become pro-active (we made use of this with a bonus system)
- customer satisfaction skyrocketed

- **THAN WE TOOK IT A STEP FURTHER**



WAS THERE TO HELP

The NEW wish list

We wanted to;

- implement an even more rigorous preventive maintenance schedule
- reduce the number of mechanics / technicians from 30 to ???
- reduce our inventory from USD 2MM to ???



The NEW wish list

We wanted to;

- implement an even more rigorous preventive maintenance (PM) schedule

Short term disadvantages;

- high upfront cost
- requires a change in mindset

Long term advantages;

- longer equipment life time & higher residual value
- equipment becomes more reliable (customer satisfaction !!)
- driver / operator accountability (one driver per truck)
this was easy to achieve with the help of FCC



The NEW wish list

We wanted to;

- implement an even more rigorous preventive maintenance schedule
- reduce the number of mechanics / technicians from 30 to ???

Short term disadvantages;

- none, this was relatively easy to accomplish
FCC provided enough details to support this decision

Long term advantages;

- lower payroll cost
- less cluttered workshop space
- better equipped for emergency break downs



The NEW wish list

We wanted to;

- implement an even more rigorous preventive maintenance schedule
- reduce the number of mechanics / technicians from 30 to ???
- reduce our inventory from USD 2MM to ???

Short term disadvantages;

- At first glance, none
 - FCC provided enough details to support this decision
- balance sheet took a huge hit

Long term advantages;

- less warehouse space required
- less money tied up
- less risk in case of theft/fire (lower insurance premium)
- much easier to control

We realized that something else had to happen.....



The NEW wish list

We wanted to;

- implement an even more rigorous preventive maintenance schedule
- reduce the number of mechanics / technicians from 30 to ???
- reduce our inventory from USD 2MM to ???

We needed to swap to a single brand truck

- negotiations with DAF, Peterbuild, MACK & Kenworth took place
- MACK offered the best deal, incl. after sales, technical support, part supplies etc



Inventory is currently
at USD 750,000

ATCO and MACK
reached a buy back
agreement for all their
trucks, against a fixed
upfront agreed rate.



ATCO

2004

32 trucks (multiple brands)

30 mechanics

1 crane (45 ton)

lowboys

inventory USD 2MM

revenue increased 125% between 2004 and 2013 (net result increased over 200%)

2013 (my last year)

56 trucks (MACK only)

14 mechanics

6 cranes (3 x 25, 2 x 60, 1 x 100 ton)

hydraulic trailer

inventory USD 750K



LAST BUT NOT LEAST



Everything I mentioned today can be cloud based and accessed with smart phone, tablet, computer, laptop in a windows as well as MAC environment

THANK YOU FOR YOUR ATTENTION



Marco J. van Daal

The Works international