Challenges

- Utilise hard won 3D data
- Reduce miscalculations on site
- Win over a non-technical workforce
- Decrease Site Costs

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- **Meeting those challenges**
  - Inroads, MX and Geopak alignments
  - DGN or DWG 3D CAD data
  - Quantities Manager payitems databases
  - Drainage data
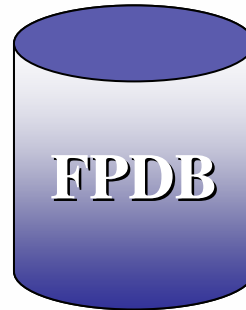 - Other Databases, drawings & pictures

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Civil Engineering

DGN/DWG   Geometry   Drainage   Quantities   Models

FPDB

Volume calculations

Crew task delivery

Site Inspection

Machine automation

Site setting out

Data collection

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Civil Engineering

- **Site Inspection**
  - Location of constructed assets
  - 3D as built data
  - Correct construction compliance
  - Pre construction spatial data collection

Site Inspection

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Civil Engineering

- Crew task delivery
  - Customised for roadtechs

  - We'll get back to that later…….

Crew task delivery

Civil Engineering

- Machine Automation
    - Construct using Alignment data
    - Construct using a DTM
    - Record machine position back into the FPDB

Machine automation

Civil Engineering

- Volume calculations
  - Using existing and design DTM
  - "Volumes on the fly"
  - Cross sections and cut & fill calculations

Volume calculations

Live

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Civil Engineering

- ## Site setting out
  - ### Use InRoads & MX alignments
  - ### 3D / 2D objects in a DGN
  - ### Record of who, when & where
  - ### Drainage database
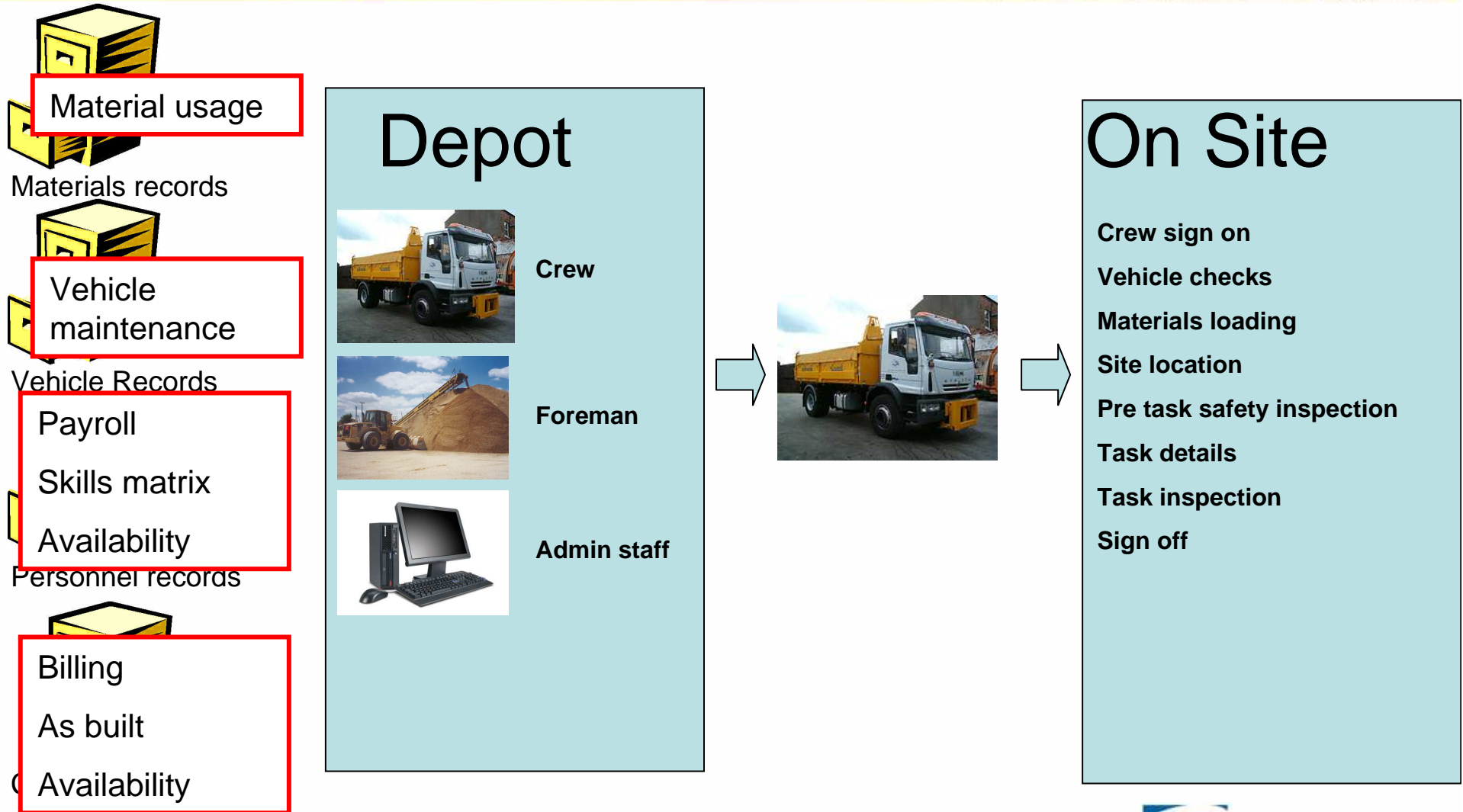 - ### Other XML data

Site setting out

Live

Data collection

- **Data collection**
  - Spatially locate data
  - Collect asset information real time
  - Connect real time with a geospatial server
  - Mobile phone based solution
  - Customisable

Crew Task delivery

Material usage

Materials records

Vehicle maintenance

Vehicle Records

Payroll

Skills matrix

Availability

Personnel records

Billing

As built

Availability

Depot

Crew

Foreman

Admin staff

On Site

Crew sign on

Vehicle checks

Materials loading

Site location

Pre task safety inspection

Task details

Task inspection

Sign off

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