

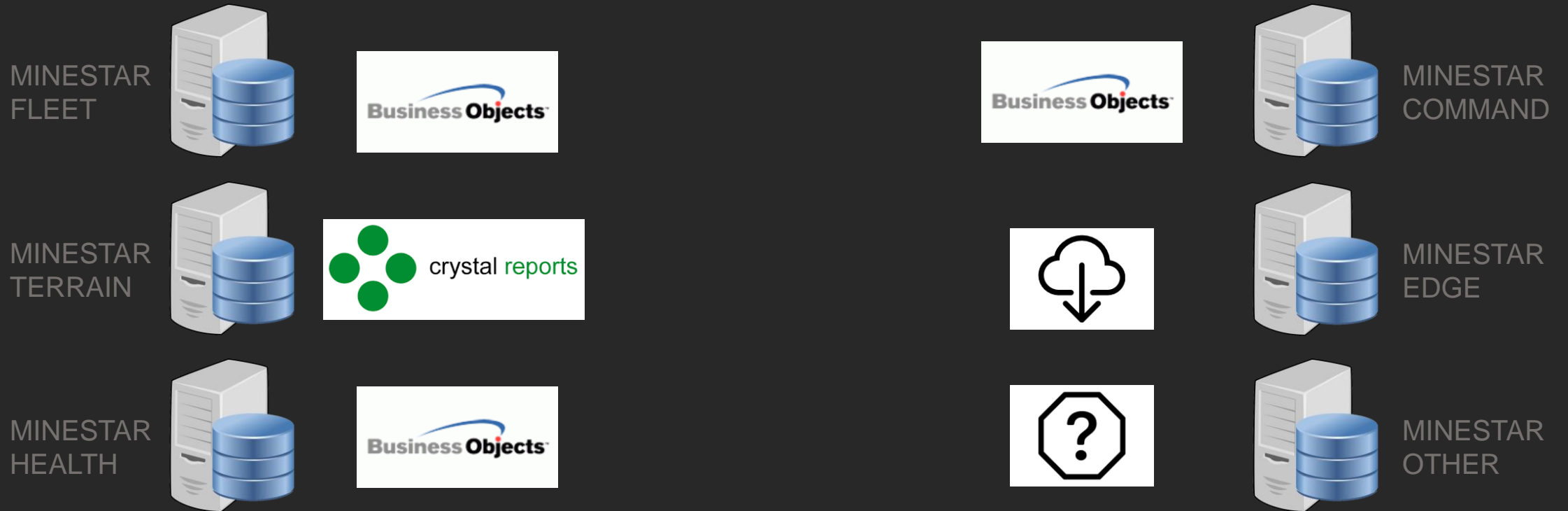
# MINESTAR REPORTING

## MineStar Reporting Roadmap



# MineStar Historical Approach to Reporting

## MineStar Reporting





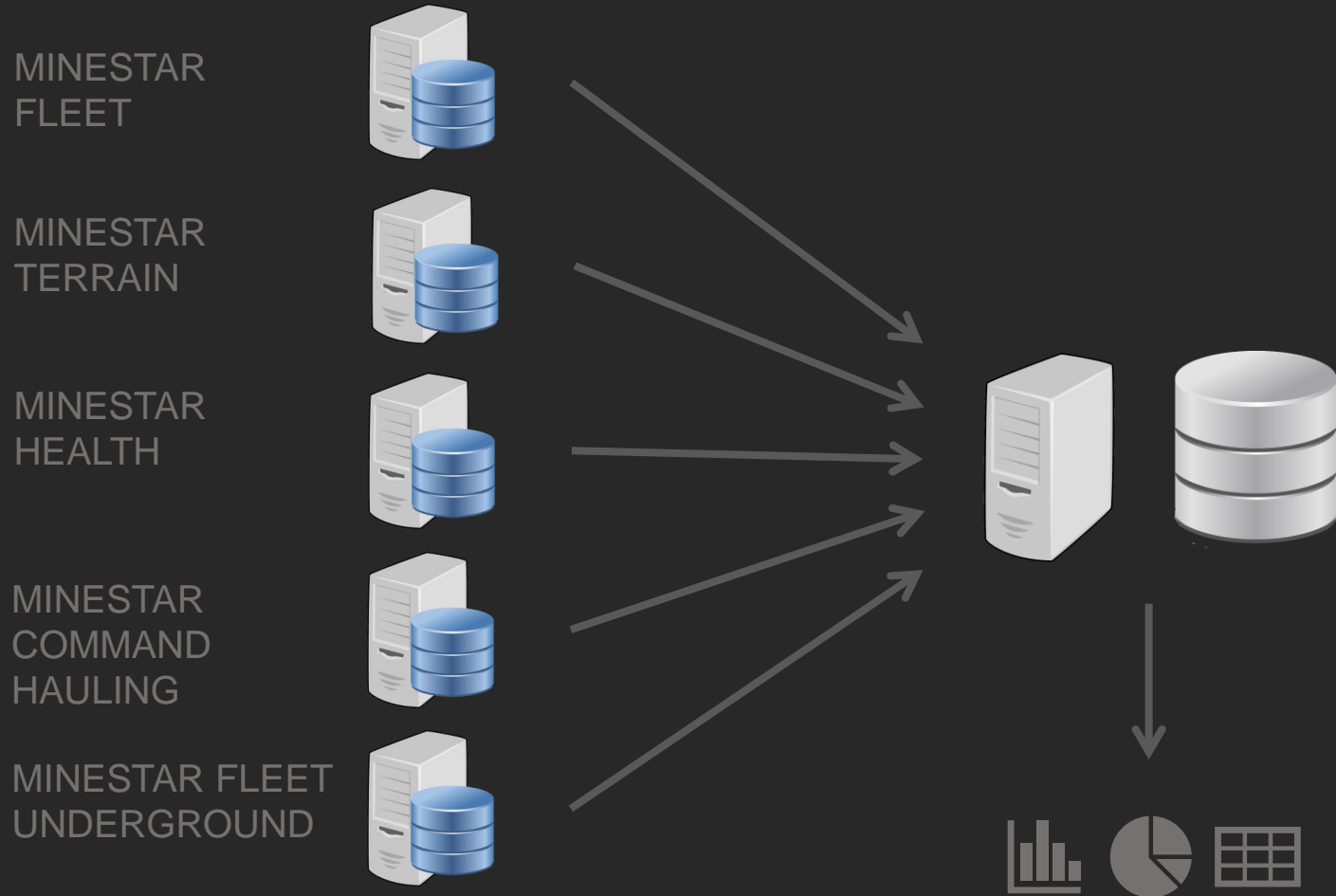
# MineStar Reporting

## Changes to reporting

- **Move away from Business Objects**
- **Common reporting tools across the MineStar product portfolio**
- **Licence technology from partner with long experience in the mining industry**
- **Deliver standard reports and dashboards**
- **Customer can optionally use preferred reporting tools to access the data**
  
- **Caterpillar or Dealer can develop custom reports and dashboards using built-in tools**
- **Customer can (optionally) licence tools to develop their own reports and dashboards**
- **Optional modules for use of non-MineStar data and advanced features such as 3D Visualisation**

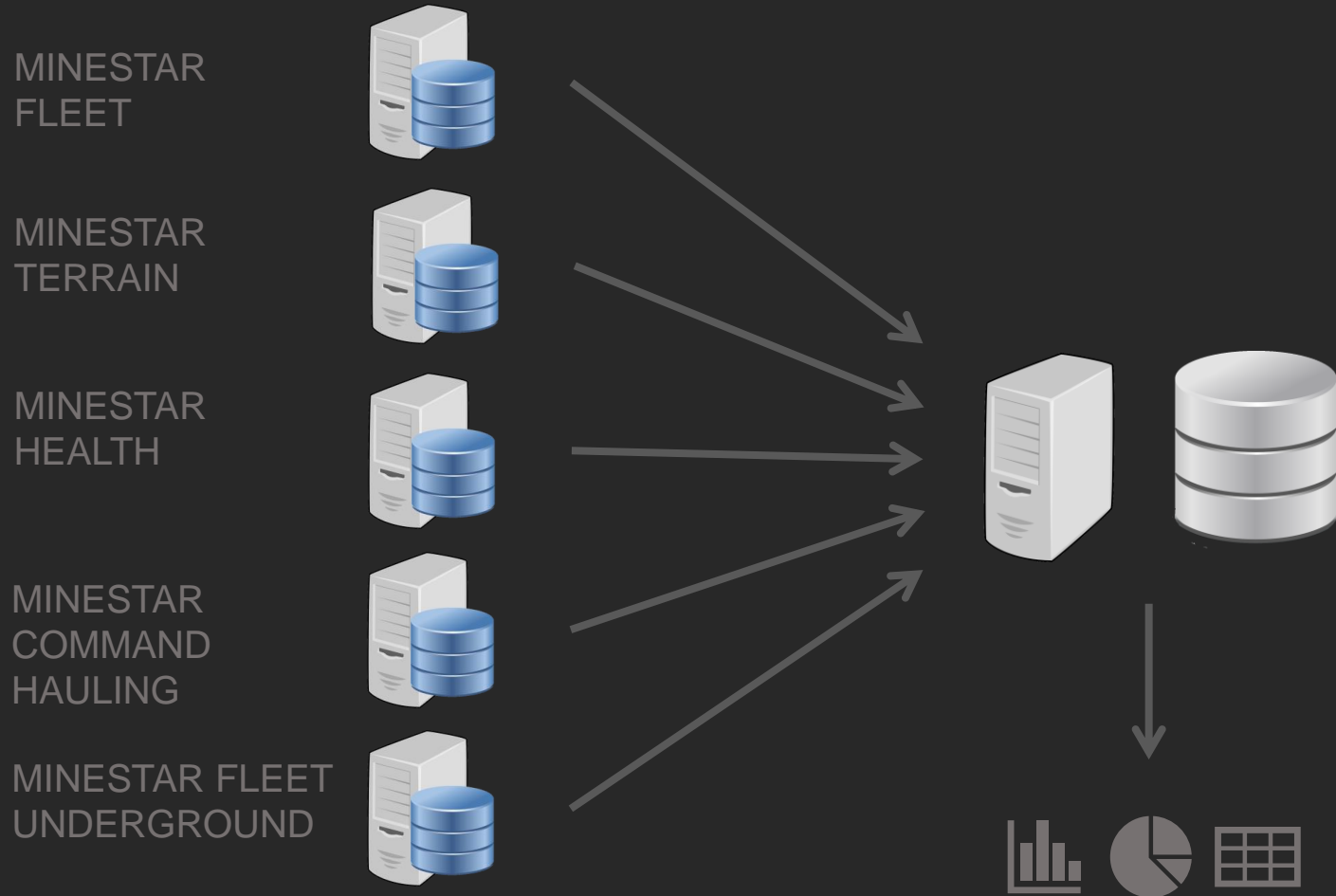
# MineStar Reporting

Currently Available

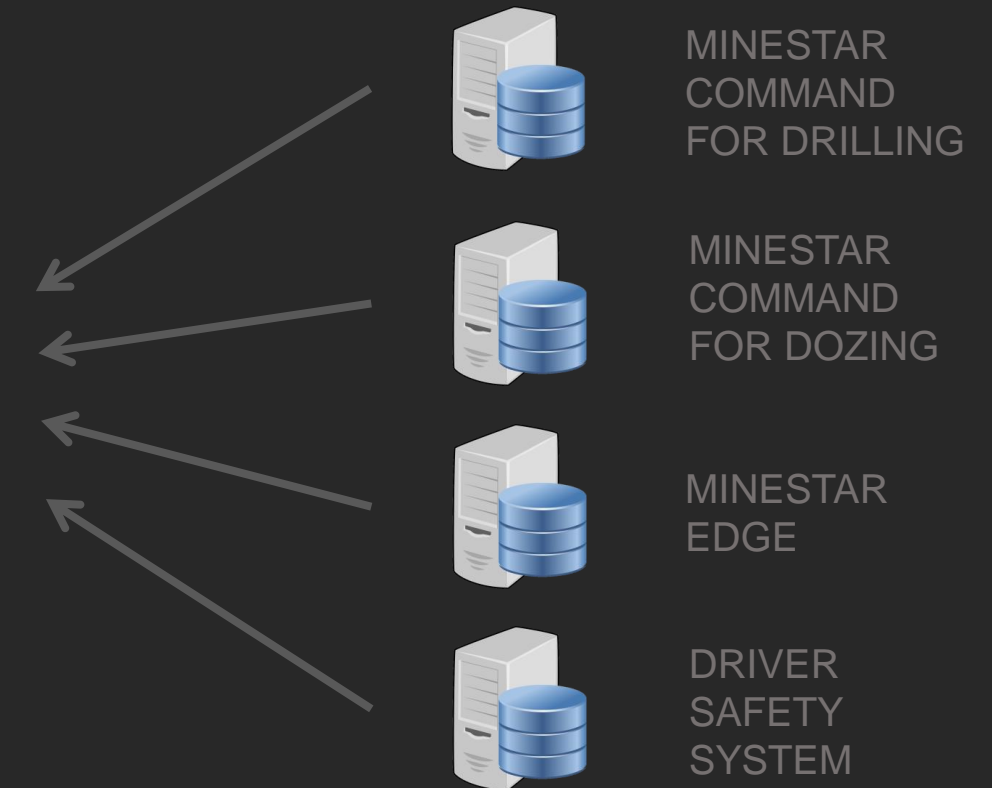


# MineStar Reporting

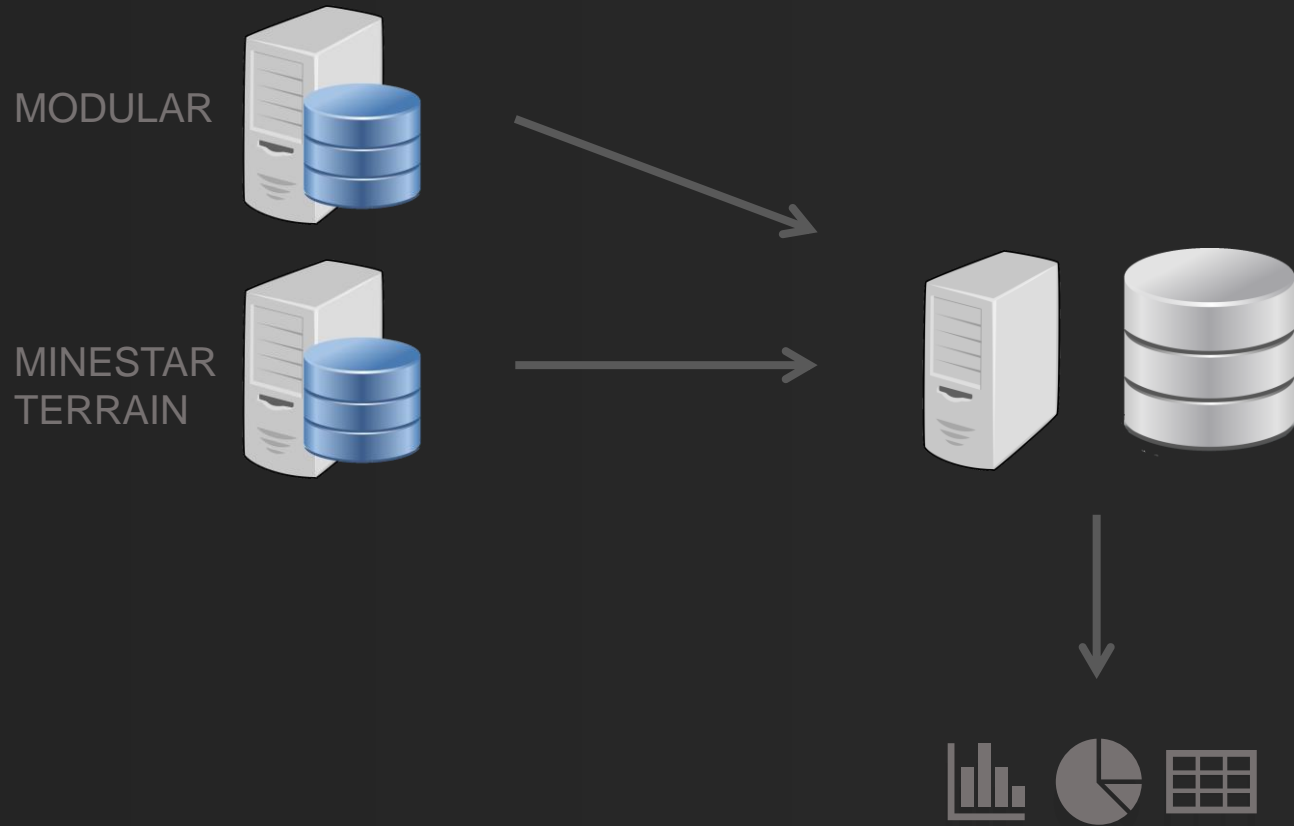
## Currently Available



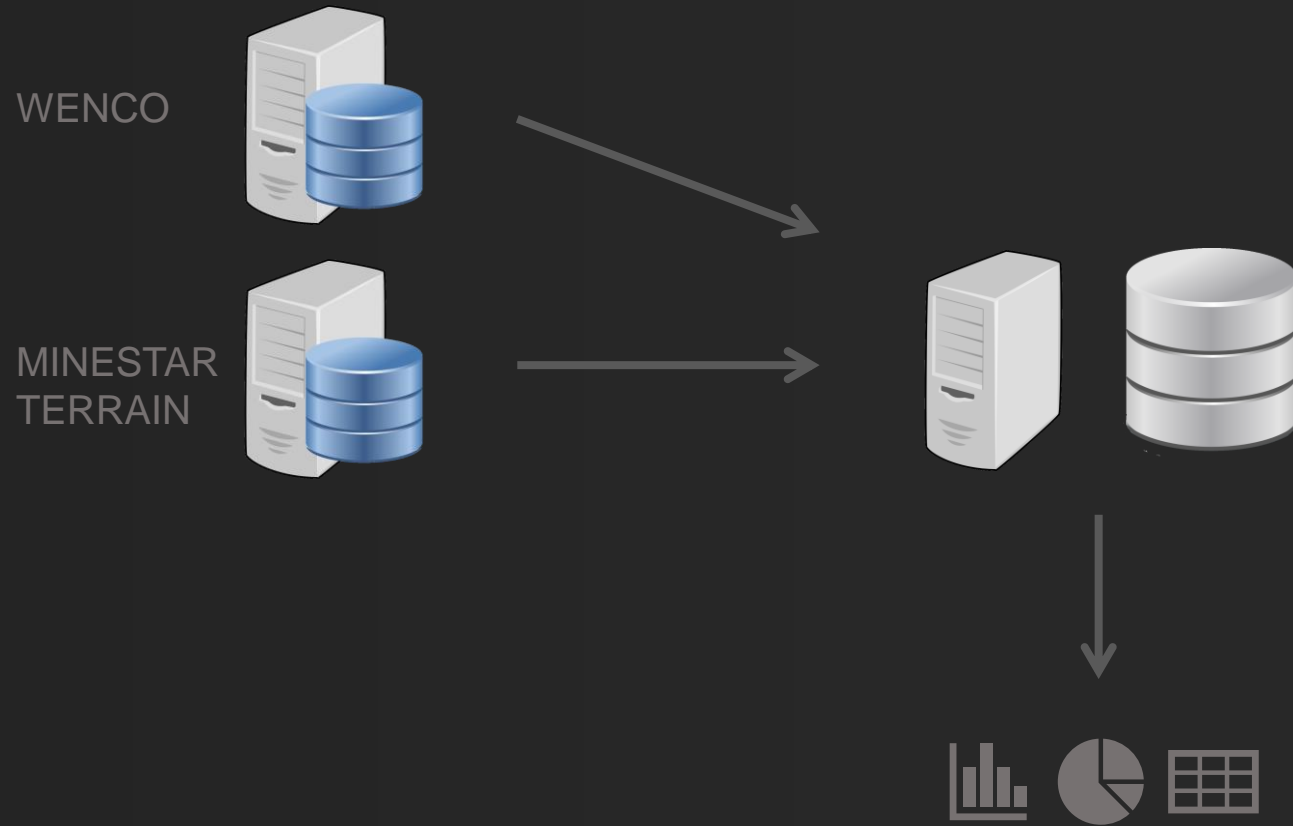
## Planned or in Development



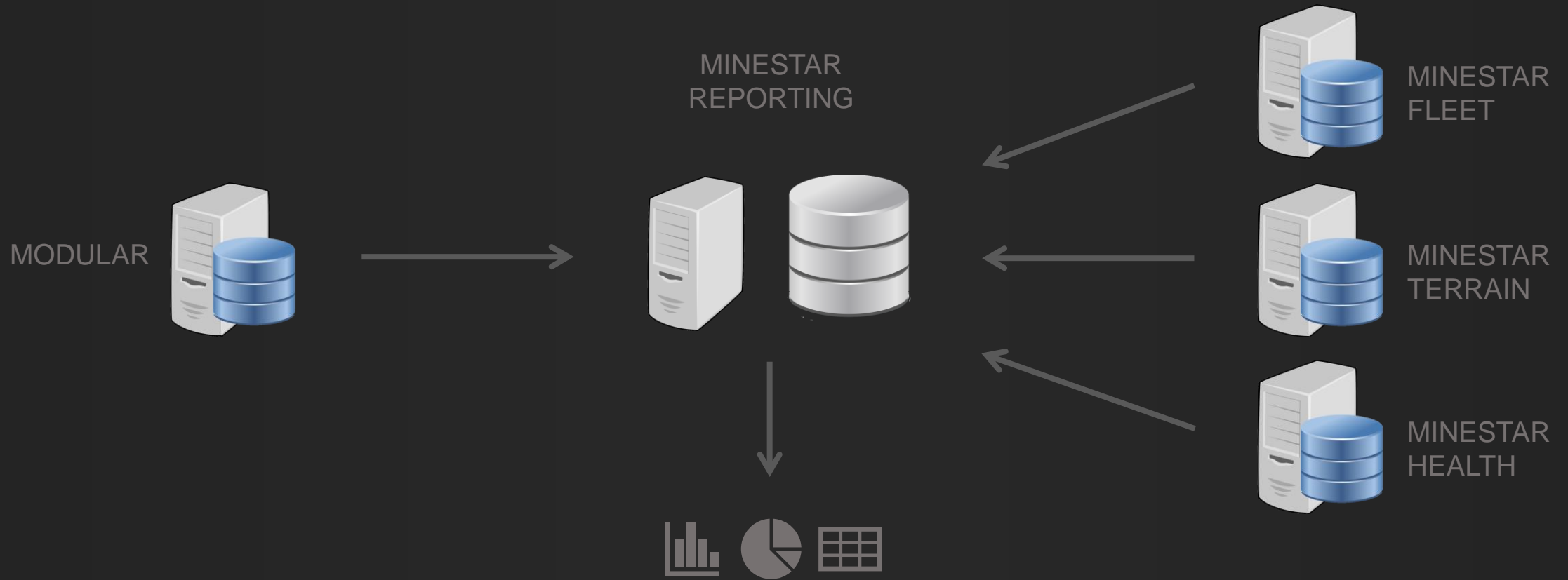
# MineStar Reporting – Terrain with Modular



# MineStar Reporting – Terrain with Wenco

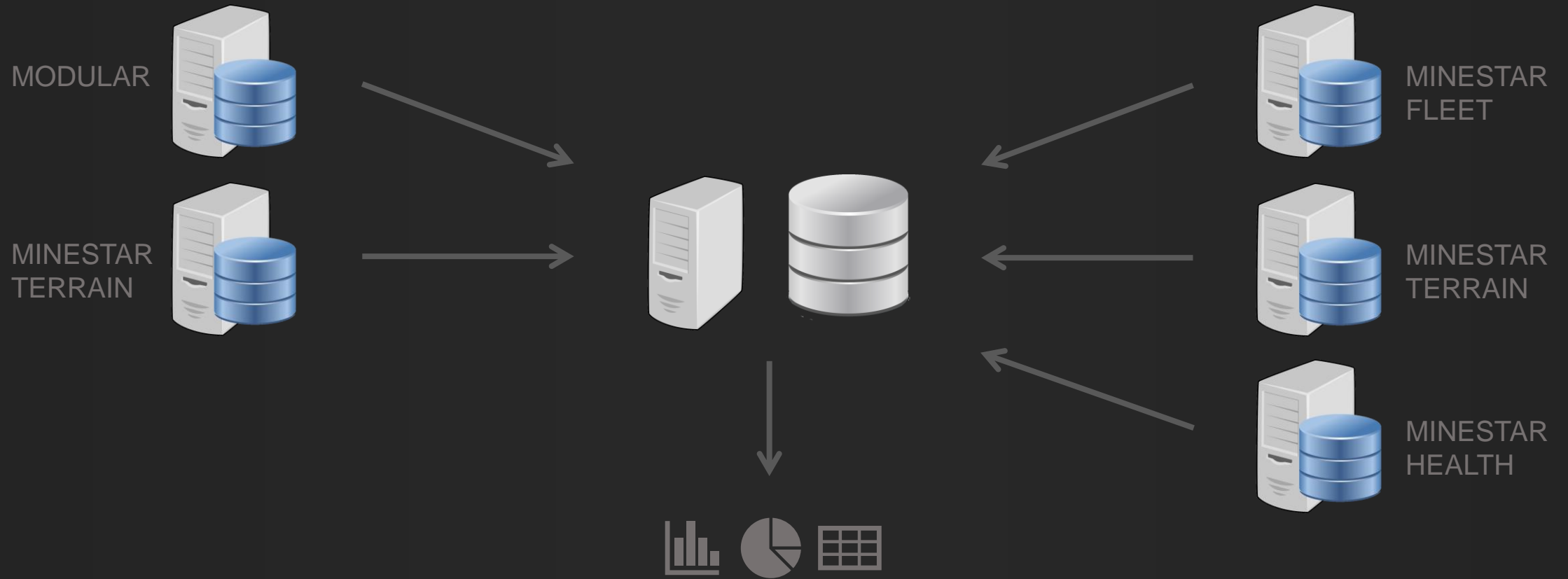


# MineStar Reporting – Migration to MineStar



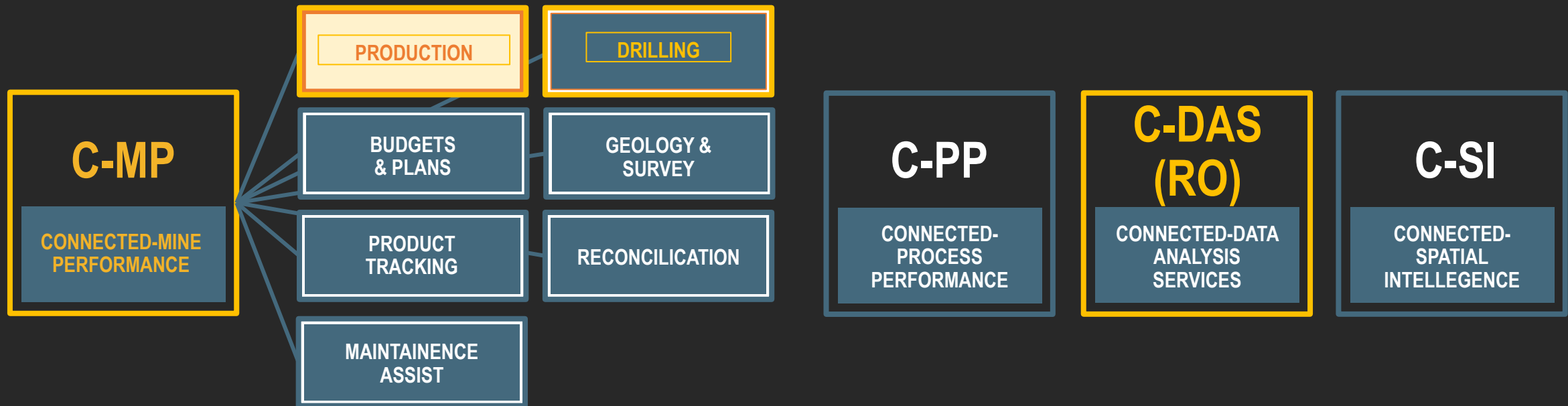


# MineStar Reporting – Multi-Site



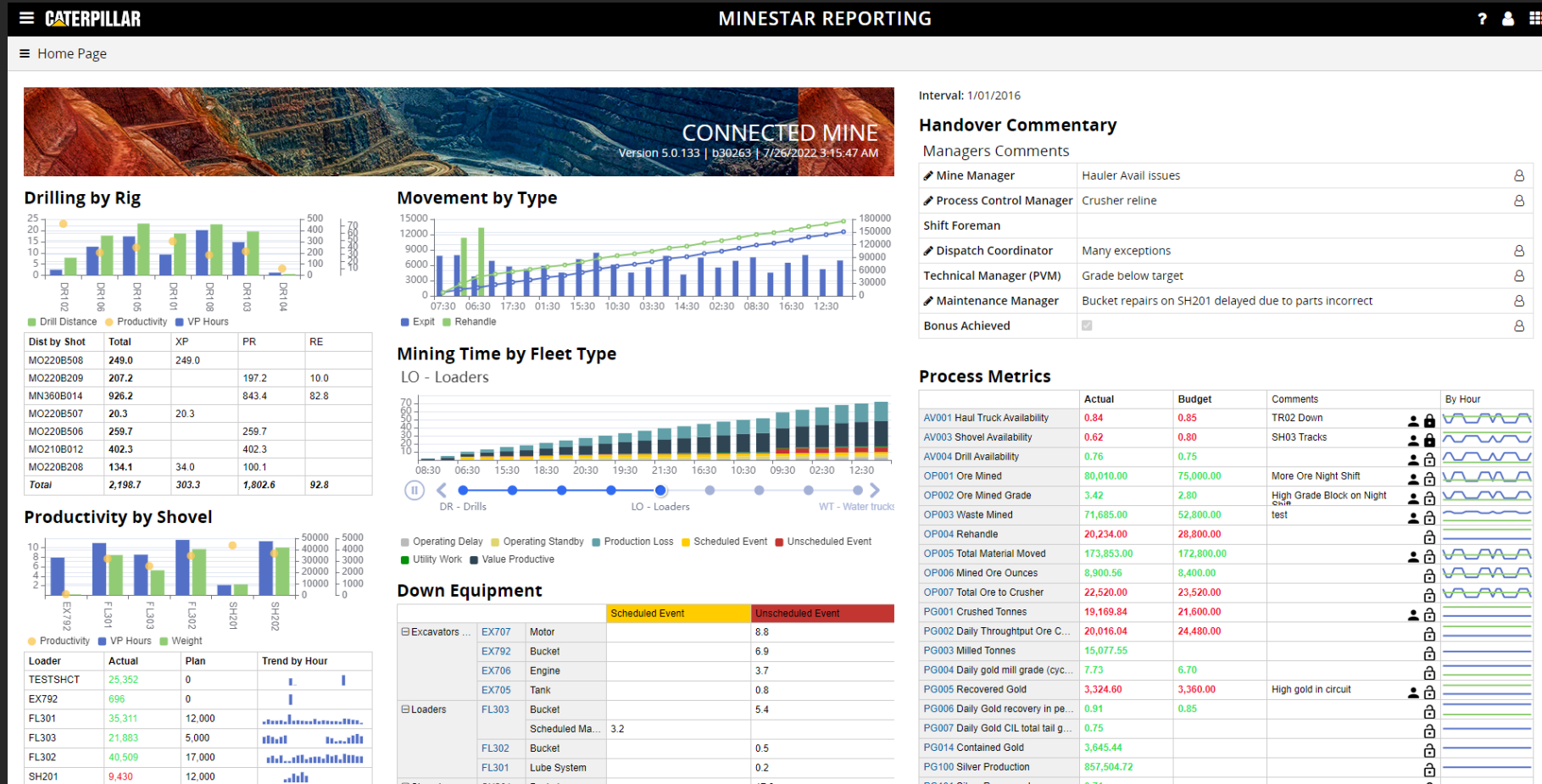
# MineStar Reporting – Non-MineStar Data

Connected Mine Additional Modules



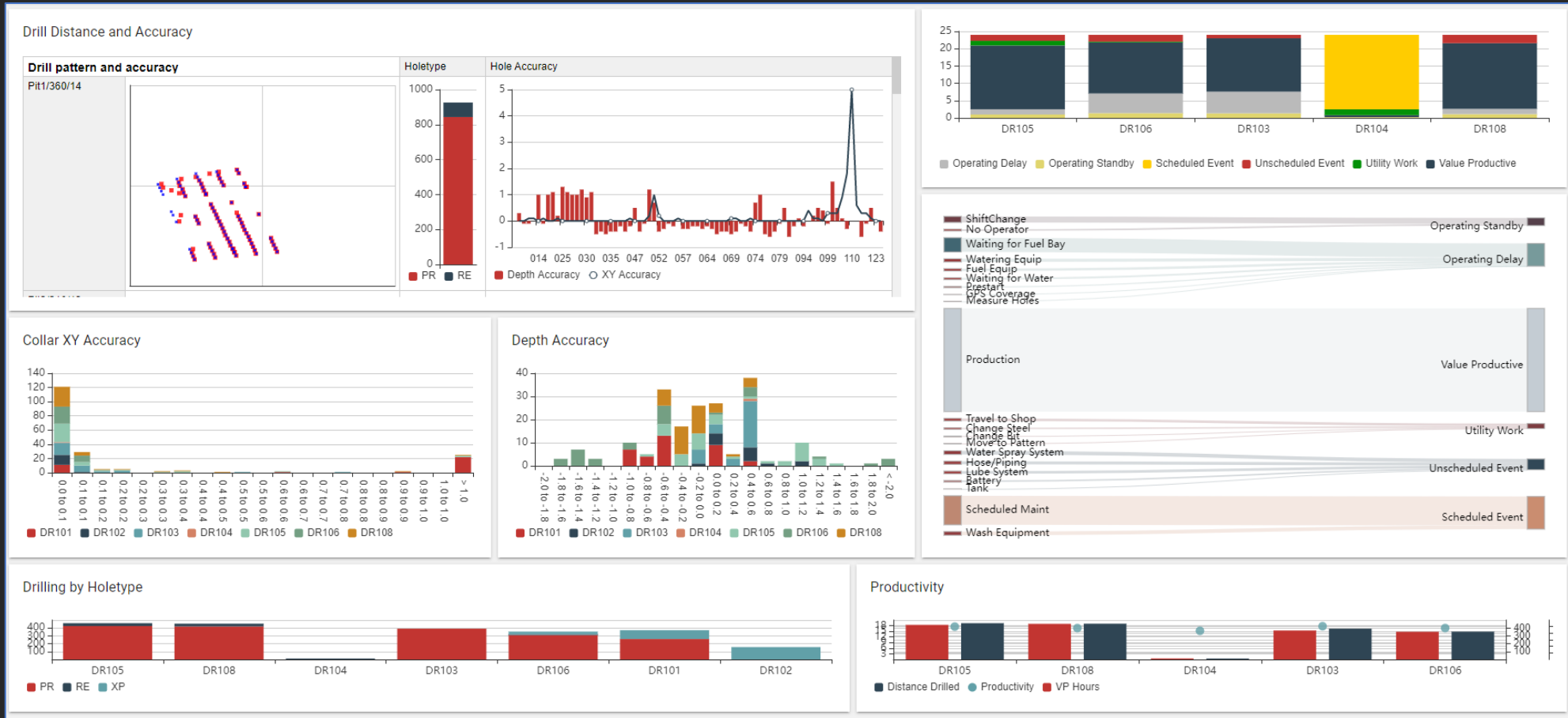
# MineStar Reporting

## Example Combined Summary



# MineStar Reporting

## DDR001 Drilling



# MineStar Reporting

## DRP001 Day Production

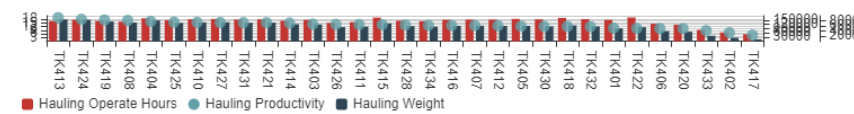
### Movement By Material

	WastePAG	MQ2	M03	H02	L03	MQ3	L02	M02	LQ2	L01	MnWstP...	WasteNAG	MQ
Expit	63,618	16,296	7,166	10,275	11,843	177	8,330	12,350	531	9,409	1,625	4,702	177
Rehandle				2,532					696				

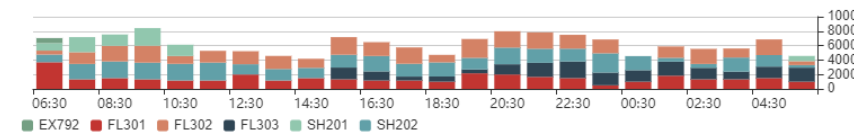
### Fleet Type Key metrics

	Avail	Util
Excavators a...	83.1	30.2
Graders	23.2	17.9
Drills	76.2	59.5
Haul trucks	84.5	68.1
Water trucks	82.6	20.3
Loaders	87.1	78.0
Unknown fle...	88.5	63.7
Tracked dozers	81.2	62.1
Rubber tyred ...	77.5	51.6
Shovels	62.0	56.2

### Haul Productivity



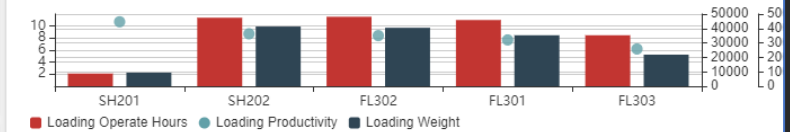
### Tonnes by hour and Loader



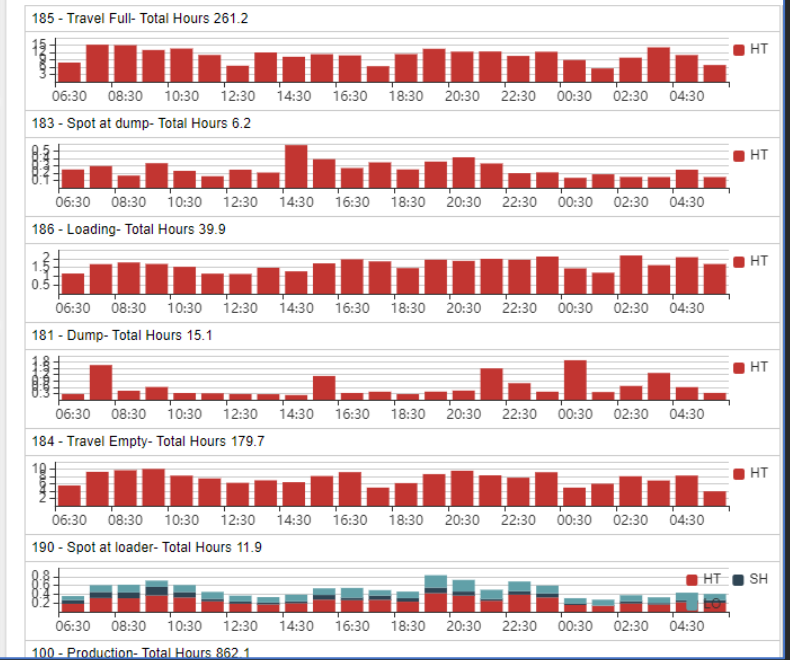
### Movement Summary

Movement	FL301	FL303	SH202	FL302	SH201	EX792	Total
Total Actual	35,311	21,883	41,898	40,509	9,430	696	149,728
Total Plan	12,000	5,000	20,000	17,000	12,000	0	66,000
By Origin							
MN370B210-01/PAG	30,948						30,948
QQ180A019-02/MQ2		16,296					16,296
MO220B801-01/PAG			19,529				19,529
MO215B005-05/M03				6,444			6,444
MO215B005-02/H02				9,230			9,230
MO215B005-03/L03				3,135	8,708		11,843

### Loader Productivity

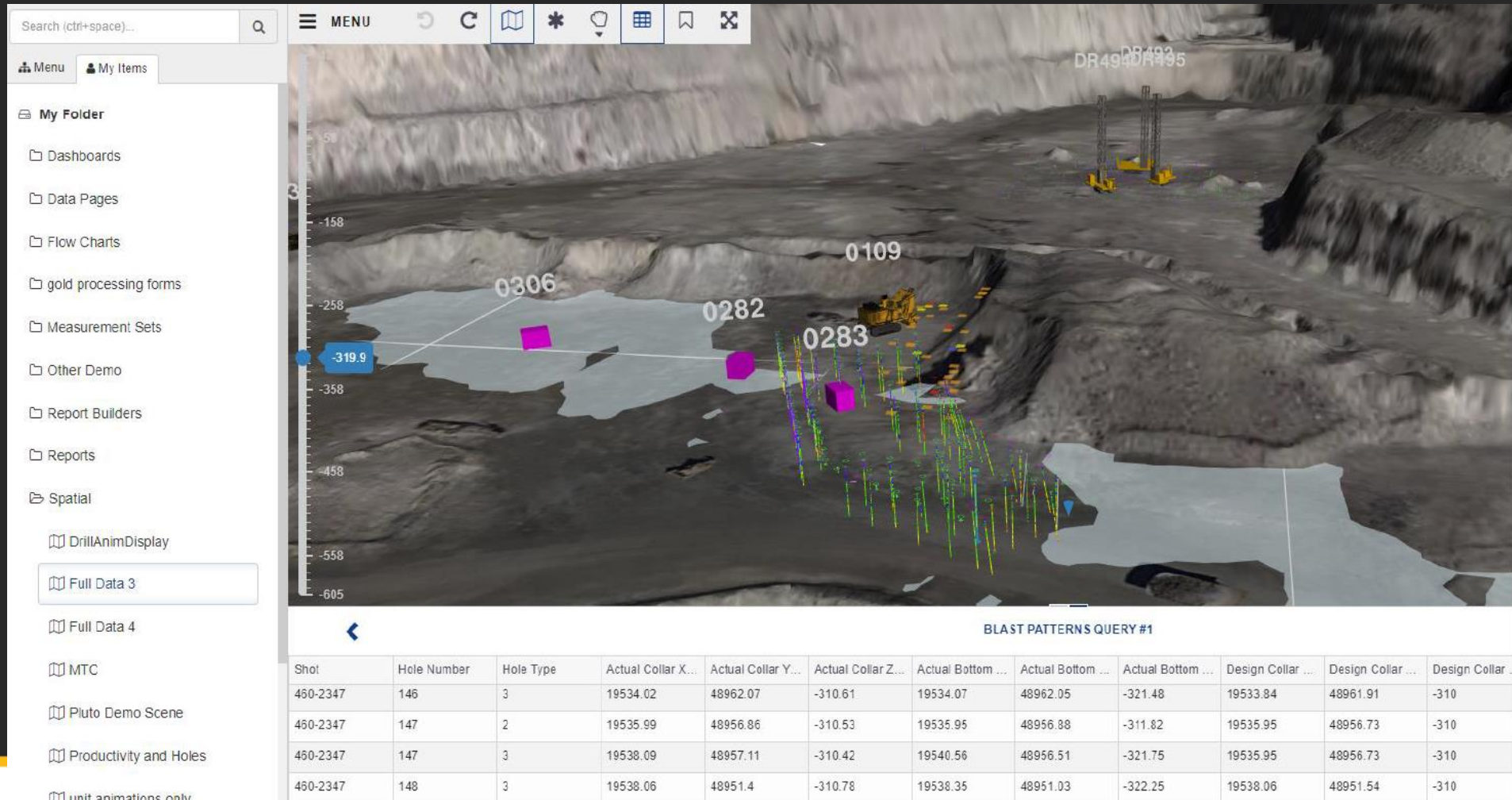


### Cycle Time Elements



# MineStar Reporting

## Optional Spatial Visualisation Capabilities





# Data Flows

## Data Sources



MineStar

Others as required

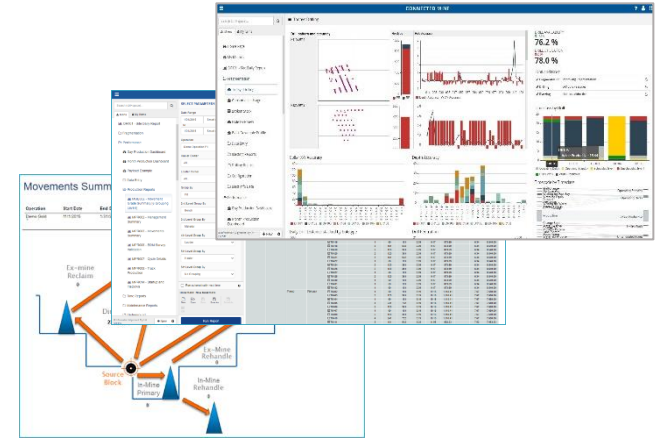
## Data Acquisition



## Database



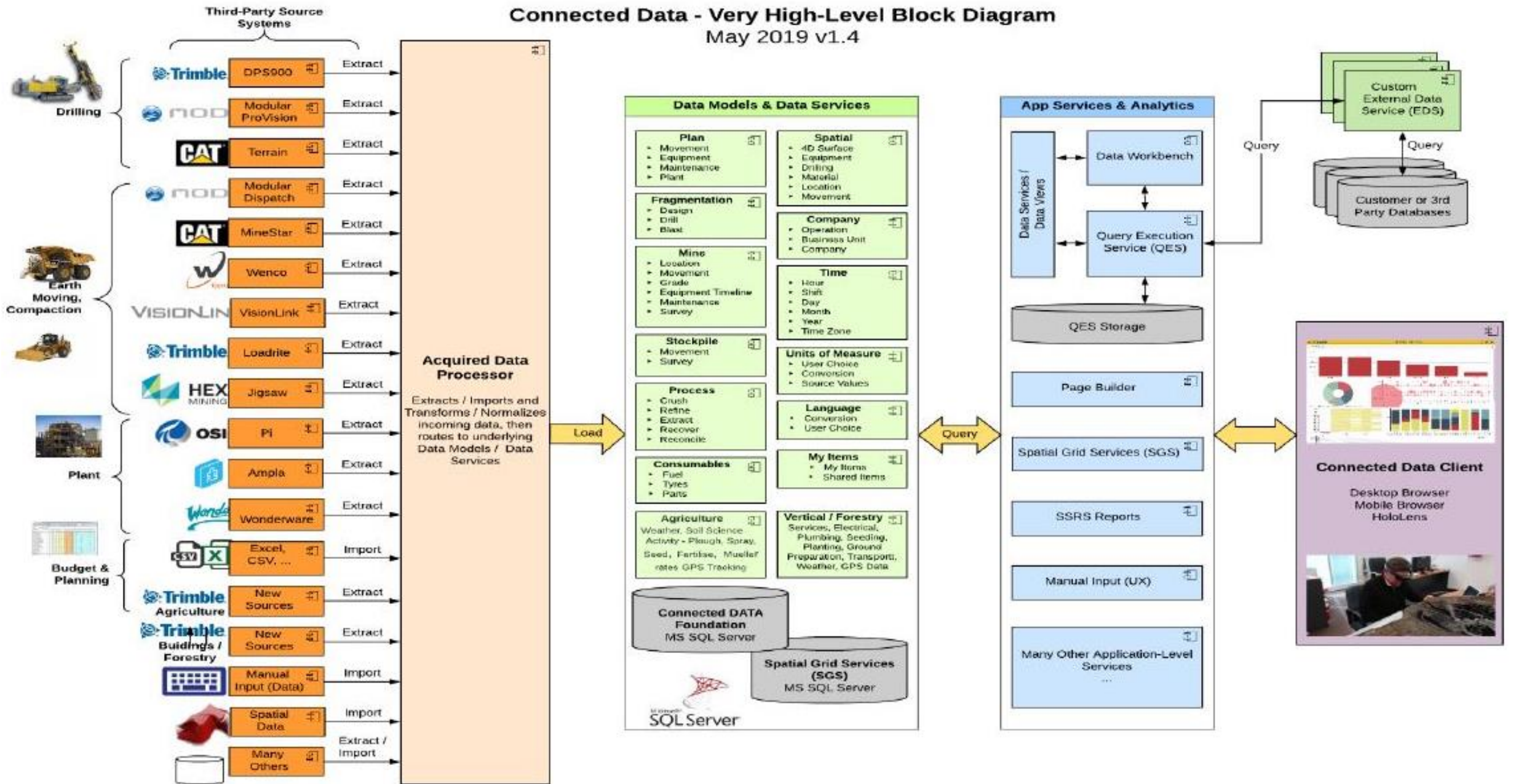
## Data Presentation



Reports and Dashboards

# Connected Data - Very High-Level Block Diagram

May 2019 v1.4



# Questions and Discussion

