

The Industrial Internet

Optimizing Operations with Big Data and Analytics

Internet of Things



Harvesting the data from these connected devices is the key to delivering value through asset and operations optimization in physical asset-intensive industries.

Business Value Selected Industry Examples



Aviation

U.S. airlines spend approximately **\$48B** in jet fuel costs.

(U.S. Bureau of Transportation Statistics).

Reducing fuel consumption by just 2% would yield

ALMOST \$1B IN SAVINGS

and this doesn't count potential savings to international carriers.



Mining

For a mid-sized mining company, predictive maintenance can reduce repair costs by up to **\$2 million per year** and the operations productivity improvement for well-maintained machines

CAN SAVE UP TO \$8 MILLION PER YEAR.



Oil and Gas

An oil exploration company **can extract \$100 million worth of crude oil** over the course of a month. The ability to predict an exploration machine's likely failure in time to repair it

CAN AVERT REVENUE LOSSES IN MILLIONS

of dollars for each day the operation would have been shut down.



Companies See The Potential For Business Value And Are Investing In Big Data Analytics To Support Asset And Operations Optimization

Process and operations optimization and control

Supply chain management and logistics

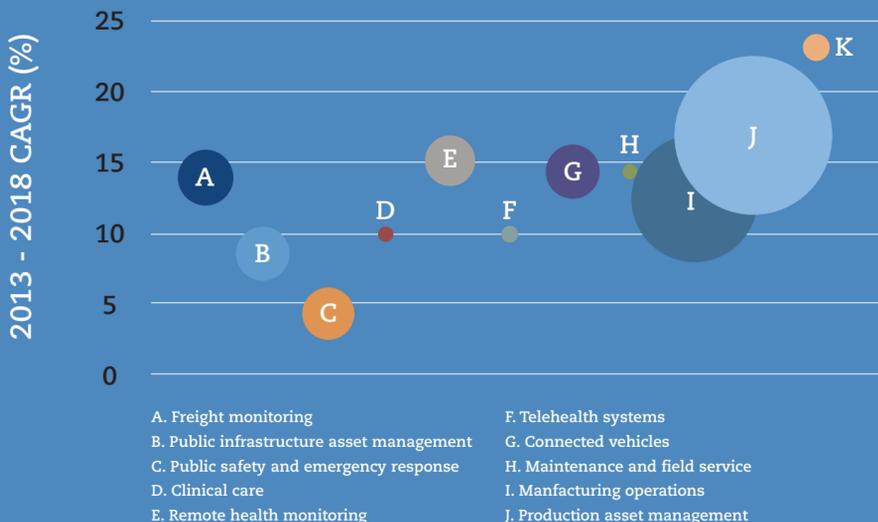
Product or service improvement and innovation

Plant facilities equipment design, maintenance and use



Projected Spend Across Industries For Internet Of Things Use Cases

IT/OT conversion identified as key



Source: IDC, First Look: The Internet of Things Market Opportunity by Use Case, #252010

Data Challenge

Big data management is critical



Typically, **80%** of an analytics project involves gathering and then preparing the data for analysis.

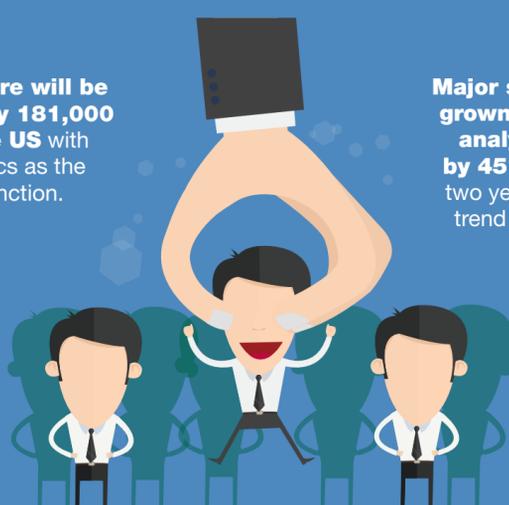
Organizational Preparation

Increasing demand for personnel with new skills

By 2018, there will be approximately 181,000 roles in the US with deep analytics as the primary function.

Major services firms have grown their big data and analytics headcounts by 45% in each of the past two years. IDC expects this trend to continue in 2015.

Nearly 5x that many positions will require skills involving big data and analytics, such as data interpretation, analysis, visualization and presentation.



Over the past 5 years, startups in the big data and analytics software market have created about

75,000 jobs.

For more on optimizing operations, read *A Software Platform for OT Innovation*.