

IBM Watson IoT

# Canadian Maximo User Group Calgary, Alberta

## Watson Analytics for Maximo Clients!

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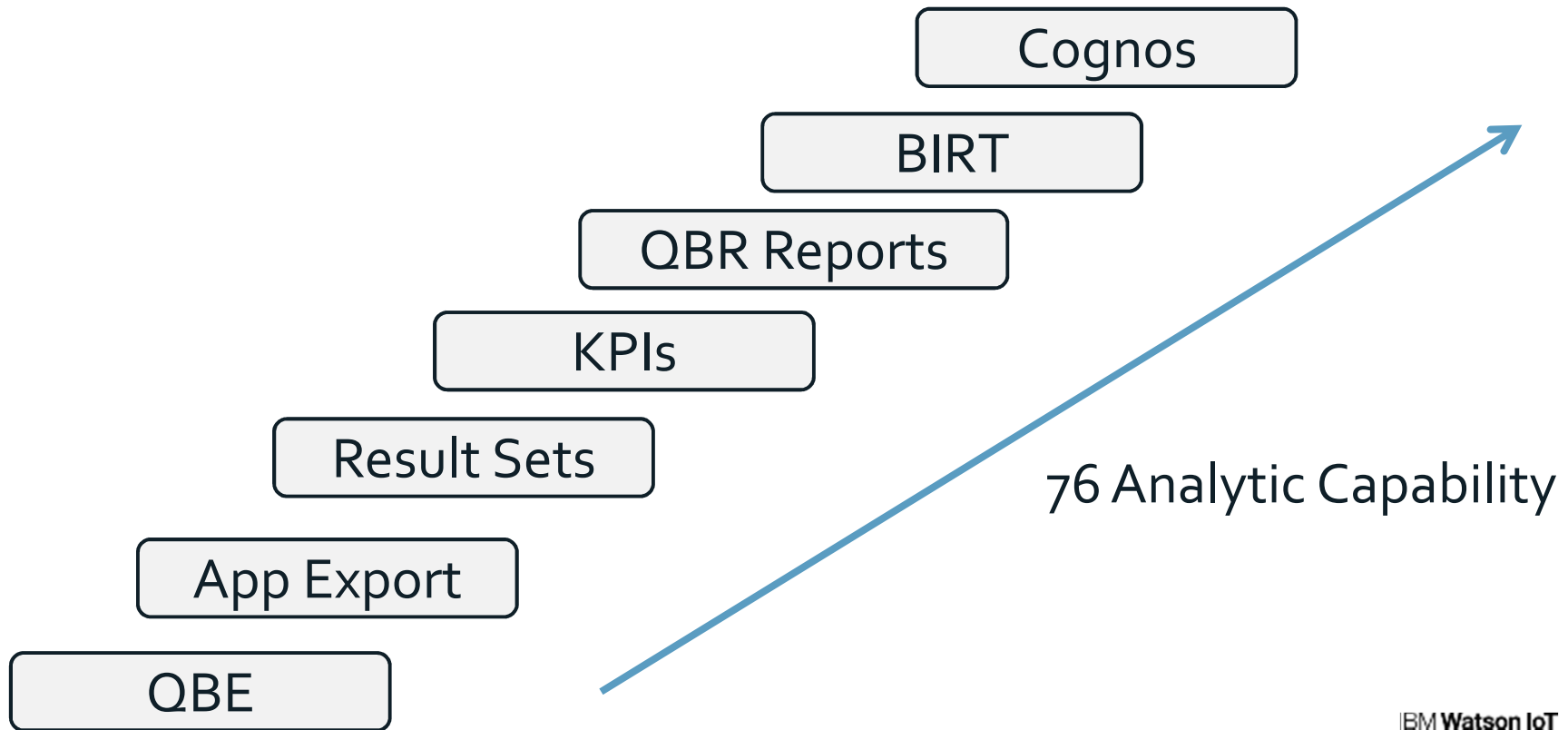
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# Maximo Analytics Portfolio



# IT Enterprise Business Intelligence

- Require significant, **technical skill sets**
- Data Sets '**predefined**'
- Data Refinement Capabilities **limited**
- **Complex installations** lead to **slower deployments**
- IT Maintenance and Administration **heavy....**

## Enterprise feature set



Watson....

# User Analytics

The image shows four vertical panels with icons and text:

- Panel 1:** Icon of a speech bubble with a question mark and a checkmark. Text: "To answer business questions". Subtext: "Use your own words to explore and visualize your data."
- Panel 2:** Icon of a lightbulb with a downward arrow. Text: "To take confident action on insights". Subtext: "See what influences outcome so you can act confidently."
- Panel 3:** Icon of a line graph with an upward arrow. Text: "To tell a compelling story". Subtext: "Create a dashboard so you can share your insights."
- Panel 4:** Icon of a magnifying glass over a document with '1010'. Text: "To analyze trusted data". Subtext: "Refine your data and see it reflected wherever you're working."



Cognos

BIRT

QBR reports

- architecture
- installation
- upgrades
- administration
- development
- security
- run print
- email scheduling

# Watson Analytics...Self Service Cloud Analytics

Guided **Data Exploration**

**Natural Language** Dialog

**Business User** Skill Sets

**Product Version** Agnostic

**CSV** or Database Sources

Emphasis on **Data Quality**



# Watson Analytics



## Data

Add and tune data.



## Discover

Find insights to help solve your business problems.

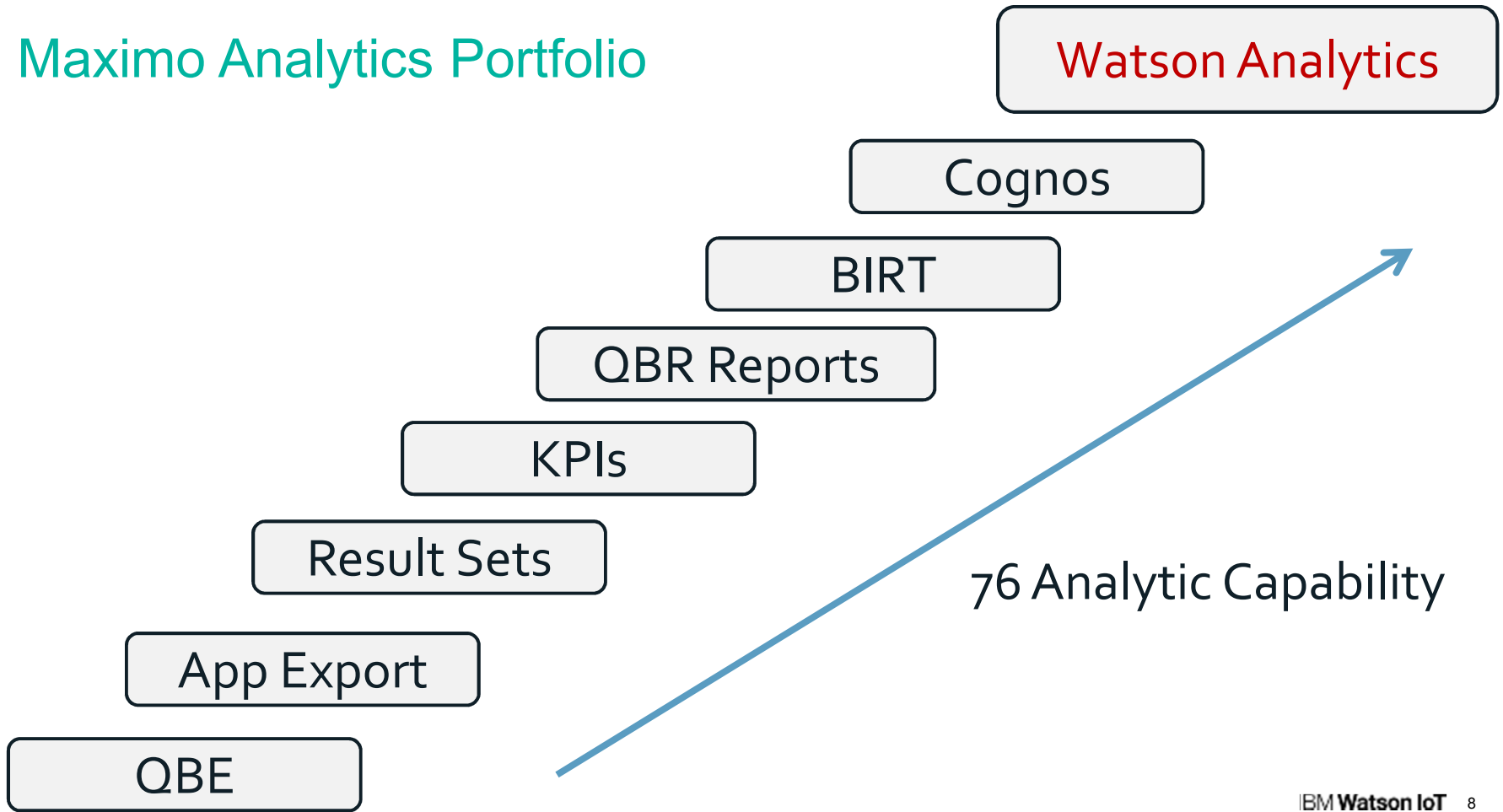


## Display

Monitor and communicate your findings with others.

DEMO

# Maximo Analytics Portfolio





## Watson can be used with ANY Maximo release

1. Export data from Maximo in csv format
  - Application QBE
  - Application Download
  - QBR reporting
  - Enterprise reports
  - Result Sets (starting in 7.6.0.4 March 2016)



OR connect Watson to your Maximo database

2. Import Maximo data set into Watson



# Maximo 7.6.0.5 ... New Business Analyst Work Center!

The screenshot displays the IBM Maximo Business Analyst Work Center dashboard. At the top, there are several key performance indicators (KPIs) and weather information. The KPIs include: EM Work with no Downtime (10%), EM Work with no Failure Data (44%), Closed Work with no Alerts (3%), Work Orders Overdue (433), and Open Work Orders Waiting Approval (131). The weather for Littleton, MA is shown as Sunny with a temperature of 68°F and Humidity of 59%.

The dashboard is divided into three main sections:

- Data Sets:** This section contains several data sets with descriptions and actions. The "Export to Watson" button for the "Purchasing Spend" data set is circled in red.
- Work Management:** This section includes a "Work Management" header with tabs for Week 1, Week 2, Week 3, and Week 4. It features a "Overview Work (Quantity)" heatmap, a "Backlog Work (Labor Hours)" bar chart, and a "Waiting on Material Work (Quantity)" pie chart.
- Schedule Management:** This section includes a "Supplier Deliveries Not Completed to Plan" donut chart and a "Work Not Completed to Plan" map of the United States.

## Maximo 7.6.0.5 ... New Work Centers!

Innovative UI displays of user actions/information

Display on Desktop, Tablet or Mobile Devices

Target specific user personas

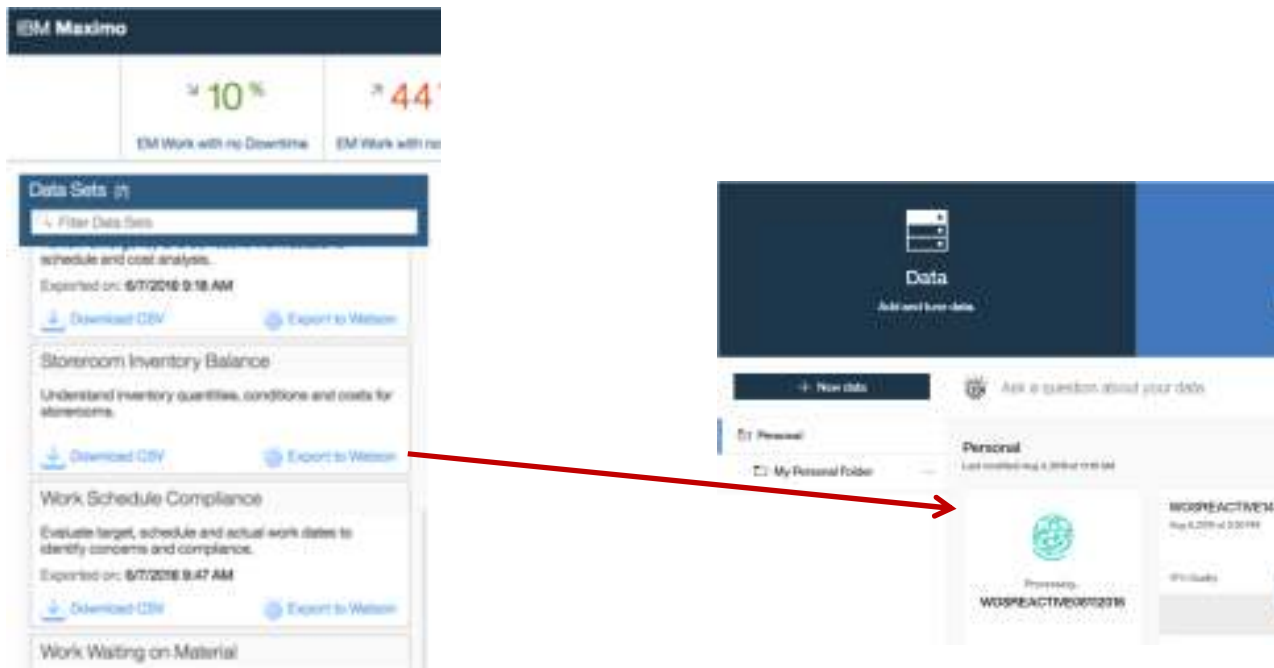
Included 'no cost' starting with Maximo 7.6.0.5

Introduce Maximo Watson Integration



# Maximo Watson Integration!

Pre -Configured Data Sets *and* Seamless Export to Watson Analytics!



# Business Analyst Work Center: Data Sets

**Reactive Work**  
Review emergency and corrective work details for schedule and cost analysis.  
Exported on: 6/3/2016 2:18 PM  
[Download CSV](#)

**Asset Details**  
Compare assets in critical areas of cost, downtime, manufacturer and age.  
Exported on: 6/3/2016 2:34 PM  
[Download CSV](#)

**Work Waiting on Material**  
Review material and work details which can not be completed due to missing material.  
Exported on: 6/3/2016 2:35 PM  
[Download CSV](#)

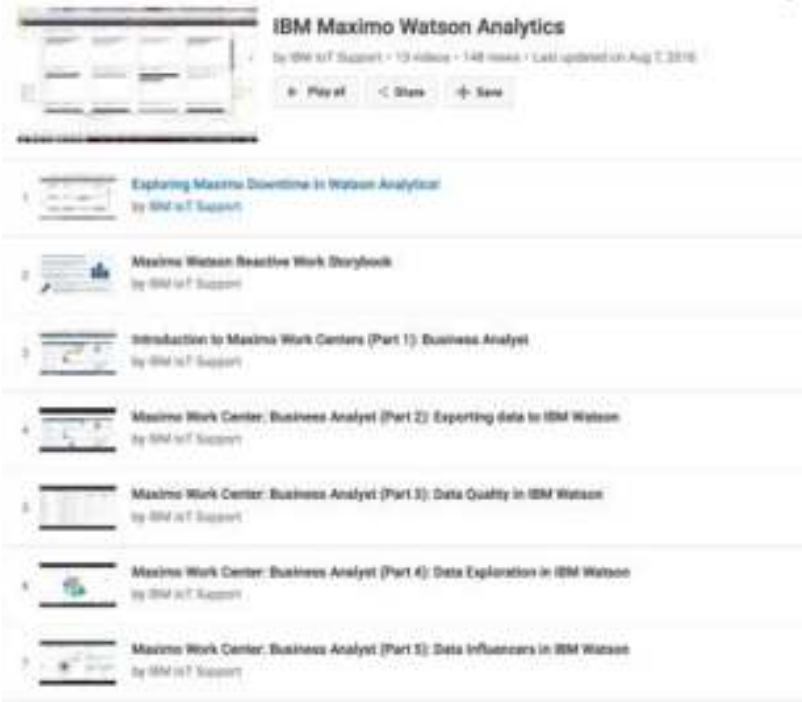
**Purchasing Spend**  
Analyze purchasing spend, including details on vendor, site and contract.  
Exported on: 6/3/2016 2:34 PM  
[Download CSV](#) [Export to Watson](#)

**Work Schedule Compliance**  
Evaluate target, schedule and actual work dates to identify concerns and compliance.  
[Download CSV](#)

**Labor Analysis**  
Review labor crafts, skill levels and regular, overtime and premium work costs.  
Exported on: 6/3/2016 2:35 PM  
[Download CSV](#) [Export to Watson](#)

**Storeroom Inventory Balance**  
Understand inventory quantities, conditions and costs for storerooms.  
[Download CSV](#) [Export to Watson](#)

## Maximo Watson You Tube Playlist



12+ videos highlighting use of Watson with Maximo data sets

<https://www.youtube.com/playlist?list=PLOBy7UFdPupdJIX25kp9wQxIILQ3kMXXW>

# Watson On-Line, Free Training on Big Data University

The screenshot shows the Big Data University website. At the top, there is a navigation bar with links for Courses, Events, Blogs, Resources, Partners, Blog, and About. The main heading is 'Watson Analytics Fundamentals'. Below this, there is a search bar and a navigation menu. The course details section includes the course title, instructor names (John Ross and Jason Salares), a target audience (business analysts, Data Scientists, Engineers), a 'Time to complete' of 2 hours, and an 'Available in' section. A 'Start Now' button is prominently displayed. The course description states: 'Learn the fundamentals of Watson Analytics. Watson Analytics offers you the benefits of advanced analytics without the complexity. A smart data discovery service available on the cloud, it guides data exploration, automates predictive analytics and custom algorithms, and helps you make confident decisions in minutes—all on your own.' Below the description is a 'Course Syllabus' section listing four lessons: Lesson 1: Data Series, Lesson 2: Data Refreshers, Lesson 3: Exploring Data, and Lesson 4: Predict Scores.



<http://bigdatauniversity.com/>

# Watson Analytics Pricing

## Purchasing

Free	Personal	Professional
<p>0.00 USD</p> <p><a href="#">Use Free</a></p> <p>Use Watson Analytics for free and get access to cognitive, predictive and visual analytics.</p>	<p>STARTING AT</p> <p>30.00 USD</p> <p>per month per user</p> <p><a href="#">Purchase Now</a></p> <p>All the analytics of the free version plus the ability to upload larger data sets.</p>	<p>STARTING AT</p> <p>80.00 USD</p> <p>per month per user</p> <p><a href="#">Purchase Now</a></p> <p>Designed for enterprises, includes multi-user environment to collaborate and more data connectors.</p>
<p>1 user</p> <p>100,000 rows per data set</p> <p>50 columns per data set</p> <p>500 MB of storage included</p>	<p>1 user</p> <p>1,000,000 rows per data set</p> <p>256 columns per data set</p> <p>2 GB of storage included</p> <p>Add more storage for an extra fee in increments of 10 GB</p>	<p>1 or more users</p> <p>10,000,000 rows per data set</p> <p>500 columns per data set</p> <p>100 GB of storage included</p> <p>Add more storage for an extra fee in increments of 50 GB</p>
<p>Upload delimited files and Microsoft Excel files</p>	<p>Upload delimited files and Microsoft Excel files</p> <p>Access to more sources of data</p> <p>Access to social data from Twitter</p>	<p>Upload delimited files and Microsoft Excel files</p> <p>Access to more sources of data</p> <p>Access to social data from Twitter</p> <p>Connect to IBM Cognos report data</p> <p>Share data sets, refined data sets, explorations, predictions, and views</p>



IBM **Watson IoT**

Thank you!

**IBM**



IBM **Watson IoT**

# Backup

**IBM**



# Watson Analytics



**Data**  
Add and tune data.

**DowntimeResearch...**  
Aug 3, 2016 at 10:20 AM

74% Quality

Xls

**WO\_Fail\_Data**  
Aug 3, 2016 at 10:17 AM

54% Quality

Csv

IBM Watson Analytics DowntimeResearch\_AssetSensor\_Data





	State/Province	City	AssetID	Date of Last Fa...	Failure Code	Hierarchy	Installation Date	Manufacturer	Recorded Date	
Quality	76 High Quality	19 High Quality	86 High Quality	60 High Quality	17 High Quality	27 Low Quality	15 Medium Quality	11 Medium Quality	15 High Quality	95 High Quality
State/Province	Text	Text	Text	Date	Text	Text	Date	Text	Date	
Distinct	Count distinct	Count distinct	Count distinct	Count distinct	Count distinct	Count distinct	Count distinct	Count distinct	Count distinct	
Sort	No sort	No sort	No sort	No sort	No sort	No sort	No sort	No sort	No sort	
State	Massachusetts	Boston	LSA	ASBM	2015-01-23	ACTOR	PRODUCTIO...	2015-01-21	Geacite	2014-01-01
State	Massachusetts	Boston	LSA	ASBM	2015-01-23	MOTOR	PRODUCTIO...	2015-01-21	Geacite	2014-01-02
State	Massachusetts	Boston	LSA	ASBM	2015-01-23	ACTOR	PRODUCTIO...	2015-01-21	Geacite	2014-01-05
State	Massachusetts	Boston	LSA	ASBM	2015-01-23	MOTOR	PRODUCTIO...	2015-01-21	Geacite	2014-01-06
State	Massachusetts	Boston	LSA	ASBM	2015-01-23	ACTOR	PRODUCTIO...	2015-01-21	Geacite	2014-01-07
State	Massachusetts	Boston	LSA	ASBM	2015-01-23	MOTOR	PRODUCTIO...	2015-01-21	Geacite	2014-01-08
State	Massachusetts	Boston	LSA	ASBM	2015-01-23	ACTOR	PRODUCTIO...	2015-01-21	Geacite	2014-01-10
State	Massachusetts	Boston	LSA	ASBM	2015-01-23	MOTOR	PRODUCTIO...	2015-01-21	Geacite	2014-01-12

















# Watson Analytics



**Discover**  
Find insights to help solve your business problems.

 <p>What are the values of Purchase Price and Replacement Cost and Mold Temperature by Country?</p>	 <p>What is the trend of Total Downtime over Year (Installation Date) by Country?</p>
 <p>How do the values of Total Maintenance Cost compare by Year (Date of Last Failure) and Country?</p>	 <p>What is the breakdown of Cavity Pressure by Year (Date of Last Failure) and Country?</p>

Create your own visualization

<p>Comparison</p>      <p>Bar    Combination    Word cloud    Pie    Heatmap</p>	<p>Parts to whole</p>    <p>Treemap    Pie    Packed bubble</p>
<p>Relationships</p>    <p>Bubble    Network    Heatmap</p>	<p>Tables and summary</p>    <p>Table    Grid    Summary</p>




# Watson Analytics



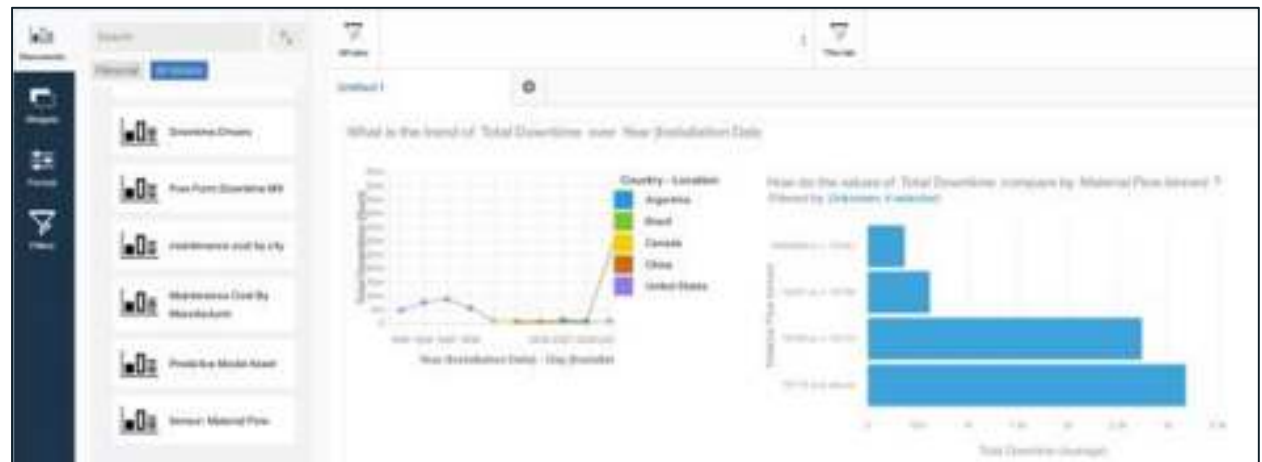
**Display**

Monitor and communicate your findings with others.

Maximo Reactive Work



- Dashboard
- Infographic
- Expert Storybook **BETA**



# Watson: Data Quality



The main data table displays a list of records with columns for various attributes. A red arrow points from the summary dashboard to a specific record in the table. Another red arrow points from a record in the table to a detailed 'Data Quality Report' pop-up window.

ID	NAME	PHONE	DOB	STREET	CITY	STATE	ZIP	EMAIL	STATUS	DATE	SCORE
1001	JOHN	555-1234	1980-01-01	123	ABC	TX	75001	john@abc.com	Active	2023-10-27	85
1002	JANE	555-5678	1985-02-15	456	DEF	CA	90001	jane@def.com	Inactive	2023-10-27	70
1003	BOB	555-9012	1978-03-20	789	GHI	NY	10001	bob@ghi.com	Pending	2023-10-27	60
1004	ALICE	555-3456	1990-04-10	012	JKL	FL	33001	alice@jkl.com	Active	2023-10-27	90
1005	CHARLIE	555-7890	1975-05-05	345	MNO	WA	98001	charlie@mno.com	Inactive	2023-10-27	55

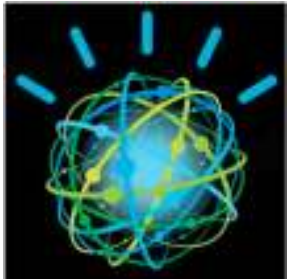
### Data Quality Report

Average Quality Score: **75**

Quality by Field:

- Name: 95%
- Phone: 80%
- DOB: 70%
- Street: 60%
- City: 50%
- State: 40%
- Zip: 30%
- Email: 20%
- Status: 10%
- Date: 5%

## Watson: Data Exploration



What do **you** want to explore next?

What is the trend of the number of Day (Failed Date) over Year (Reported Date) by Site?



What are the values of Location for Failed Date and Year (Reported Date)?



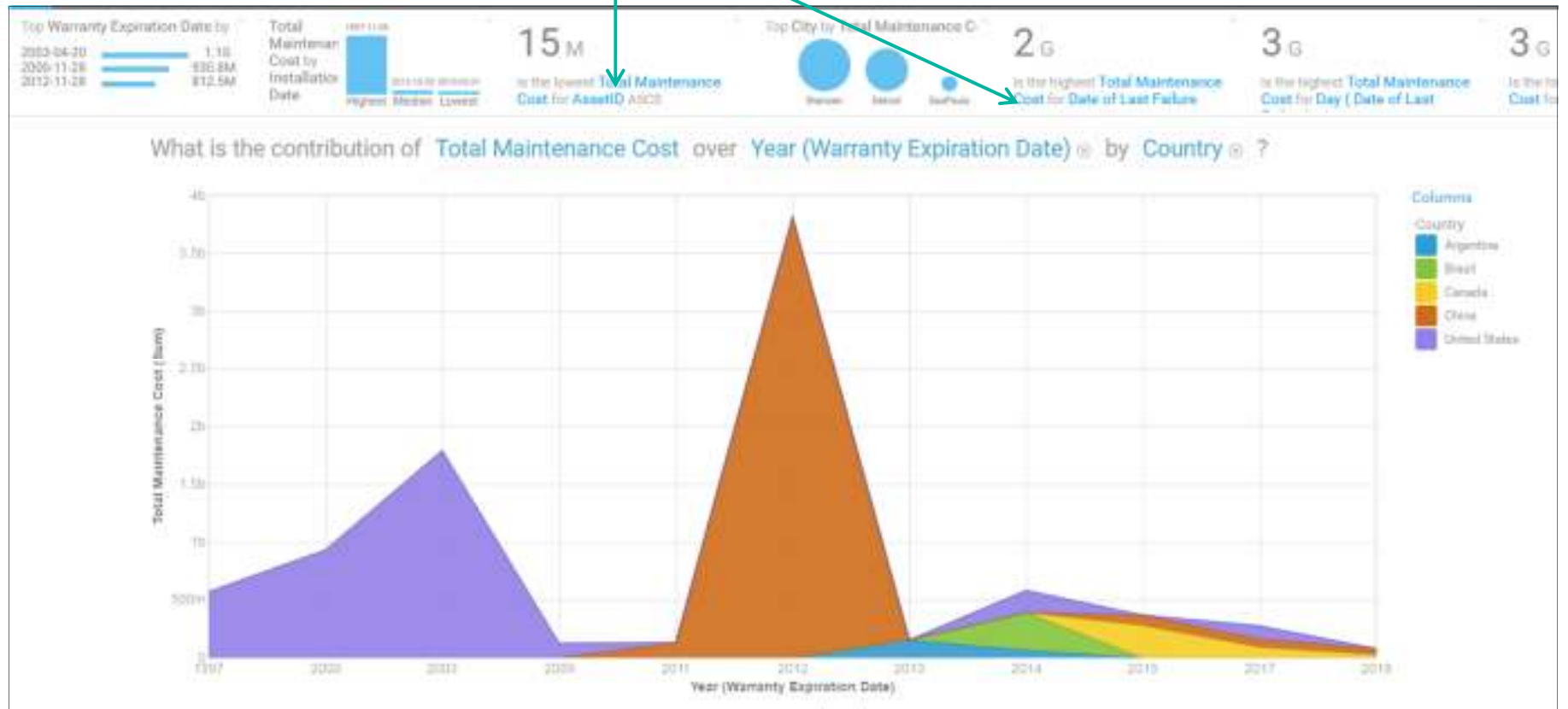
What is the relationship between Replacement Cost and Purchase Price by Year?



What are the values of TOTDOWNTIME and YTDCOST and PURCHASEPRICE by SITEID?

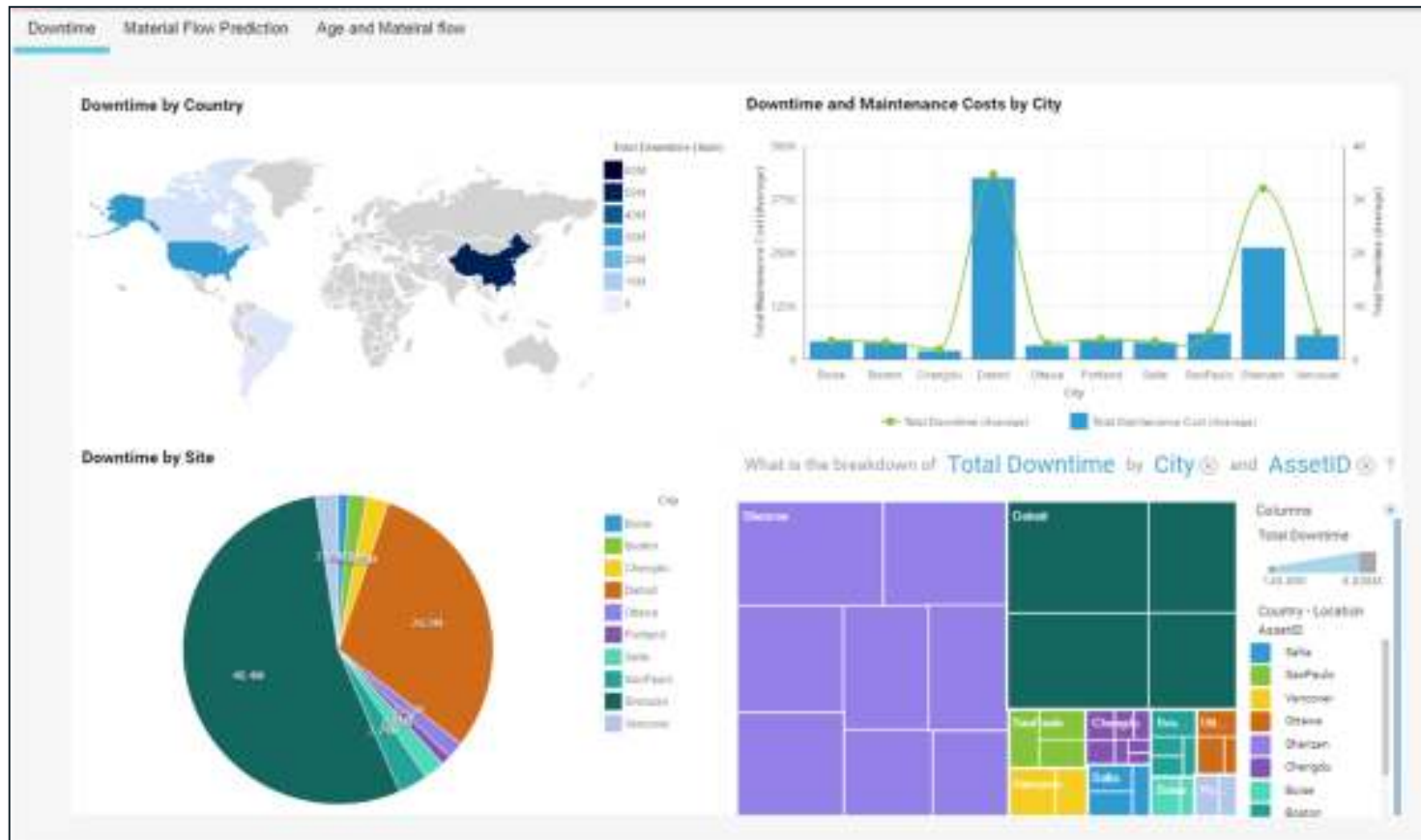


# Watson: Data Exploration





# Watson: InfoGraphics



# Watson: Pattern Recognition...Influencers



# Maximo Analytics Portfolio

