

BUSINESS ANALYTICS

Ctools: Latest Developments and Future Roadmap

Pedro Alves
Product Designer, Webdetails/Pentaho

- The Ctools are increasingly becoming an integral part of the Pentaho stack for everything visualization related. It's what combines the information and the insights.
- This is the proposed roadmap for Ctools.

- **Ultimate goal of this roadmap:**
 - Build an end user Dashboard Assembler.

- **Tailored for our product:**

- Governed
- Embeddable
- Customizable
- Easy to use

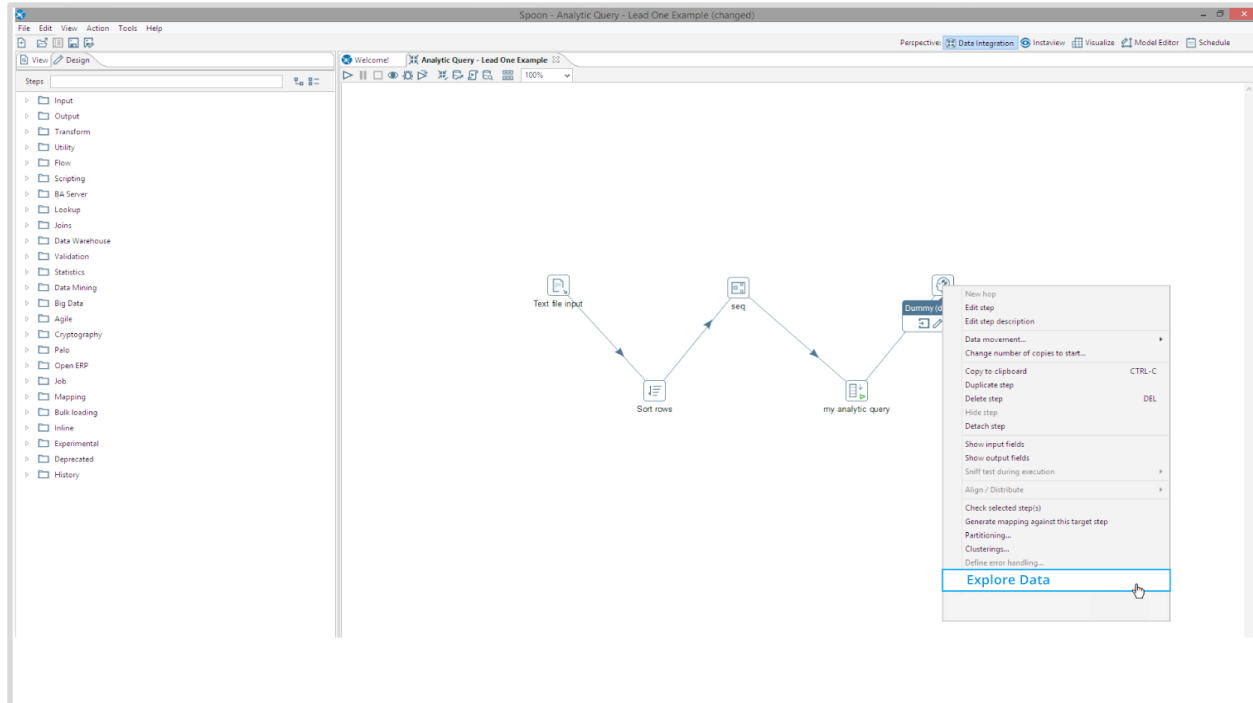
- **Our product relies on two main cores:**
 - PDI
 - Pentaho Server
- **Each focused on two complementary personas:**
 - Integration developers
 - Business consumers

- **So our Dashboard Assembler has to focus on 2 paths:**
 - From data
 - From empty dashboard

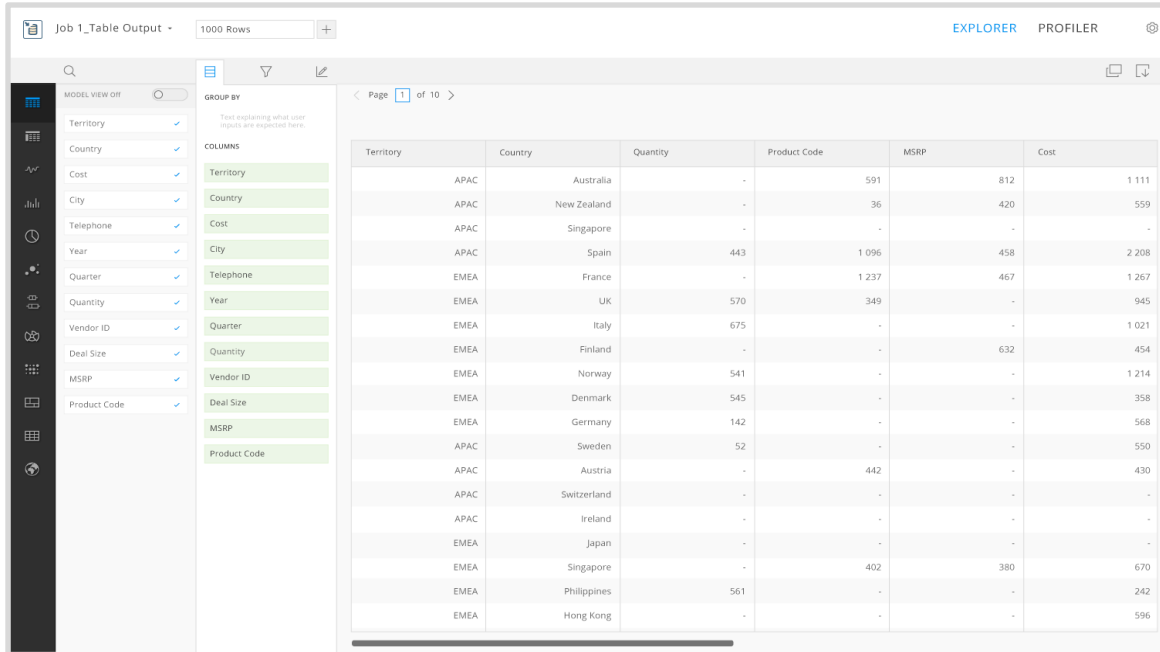
- **And they have to meet in the middle**
- **From Data**
 - PDI → Data Exploration → Visualization → Layout assembly → Dashboard
- **From Layout**
 - Mockup → Layout Assembly → Component selection → Data selection → Dashboard

- Building a coherency from within our product means bringing together ETL users and power users. We need to aim towards the same data exploration experience from both ends.

- We're bringing more data analysis capabilities to PDI.



- Creating the visualizations from within PDI that later can be combined and reused.



Job 1_Table Output - 1000 Rows

EXPLORER PROFILER

MODEL VIEW OFF

GROUP BY

Text explaining what user selects are expected here.

COLUMNS

Territory

Country

Cost

City

Telephone

Year

Quarter

Quantity

Vendor ID

Deal Size

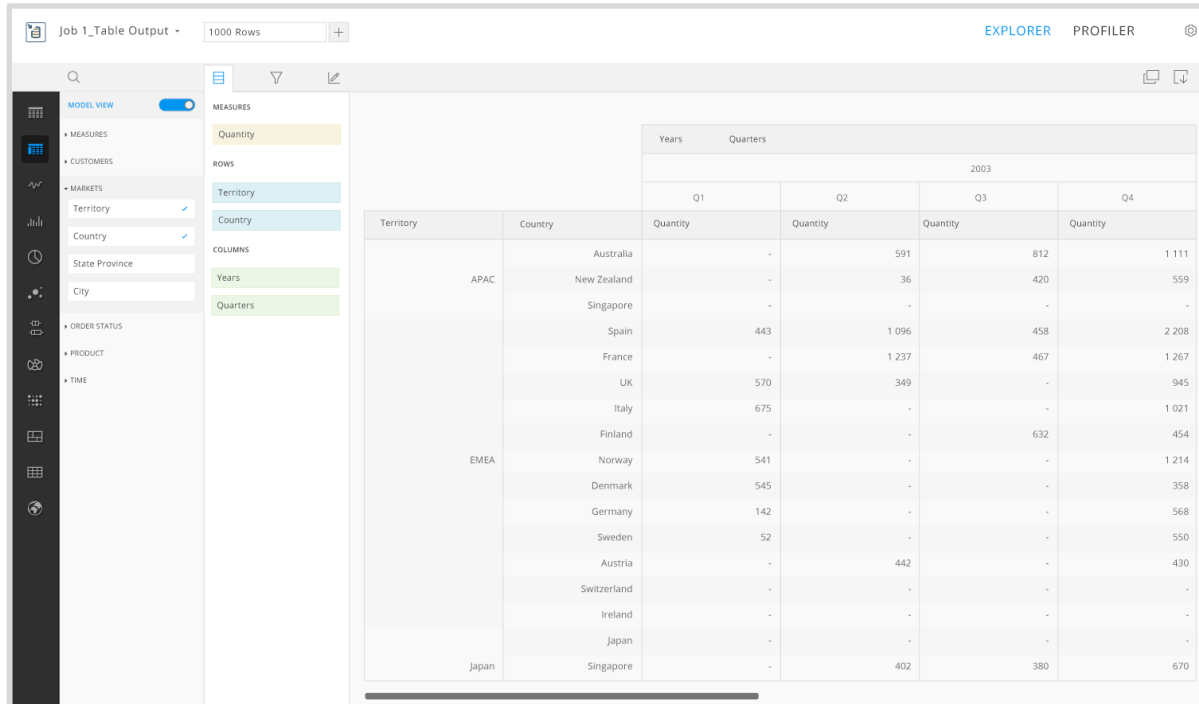
MSRP

Product Code

Page 1 of 10

Territory	Country	Quantity	Product Code	MSRP	Cost
APAC	Australia	-	591	812	1 111
APAC	New Zealand	36	420	559	-
APAC	Singapore	-	-	-	-
APAC	Spain	443	1 096	458	2 208
EMEA	France	-	1 237	467	1 267
EMEA	UK	570	349	-	945
EMEA	Italy	675	-	-	1 021
EMEA	Finland	-	-	632	454
EMEA	Norway	541	-	-	1 214
EMEA	Denmark	545	-	-	358
EMEA	Germany	142	-	-	568
APAC	Sweden	52	-	-	550
APAC	Austria	-	442	-	430
APAC	Switzerland	-	-	-	-
APAC	Ireland	-	-	-	-
EMEA	Japan	-	-	-	-
EMEA	Singapore	-	402	380	670
EMEA	Philippines	561	-	-	242
EMEA	Hong Kong	-	-	-	596

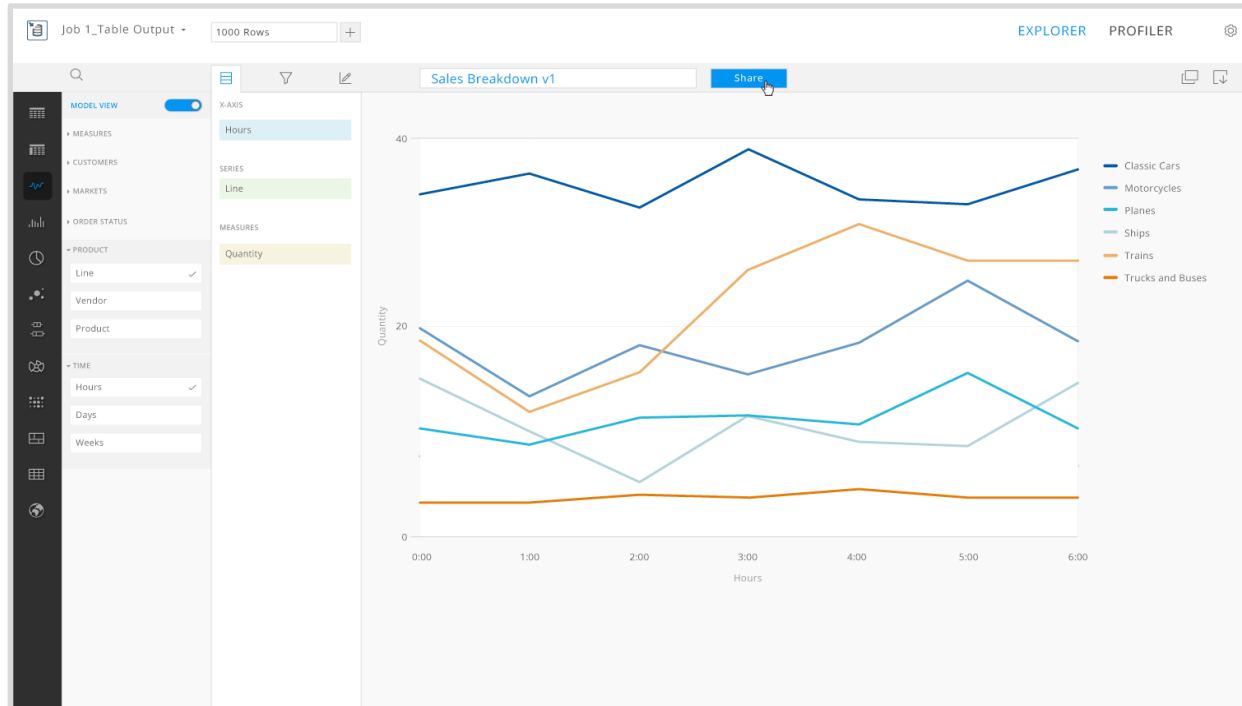
- From simpler tables to more advanced exploration.



The screenshot shows the Pentaho Data Explorer interface. The top bar indicates 'Job 1_Table Output' with '1000 Rows' and buttons for 'EXPLORER' and 'PROFILER'. The left sidebar contains a search bar and a list of dimensions: MEASURES, CUSTOMERS, MARKETS, ORDER STATUS, PRODUCT, and TIME. The 'MARKETS' section is expanded, showing 'Territory' and 'Country' as selected dimensions. The main area displays a table with columns for Territory, Country, and Quantity, grouped by Years and Quarters. The table data is as follows:

		Years			
		Quarters			
		2003			
		Q1	Q2	Q3	Q4
Territory	Country	Quantity	Quantity	Quantity	Quantity
APAC	Australia	-	591	812	1 111
	New Zealand	-	36	420	559
	Singapore	-	-	-	-
EMEA	Spain	443	1 096	458	2 208
	France	-	1 237	467	1 267
	UK	570	349	-	945
	Italy	675	-	-	1 021
	Finland	-	-	632	454
	Norway	541	-	-	1 214
	Denmark	545	-	-	358
	Germany	142	-	-	568
	Sweden	52	-	-	550
	Austria	-	442	-	430
	Switzerland	-	-	-	-
Japan	Ireland	-	-	-	-
	Japan	-	-	-	-
	Singapore	-	402	380	670

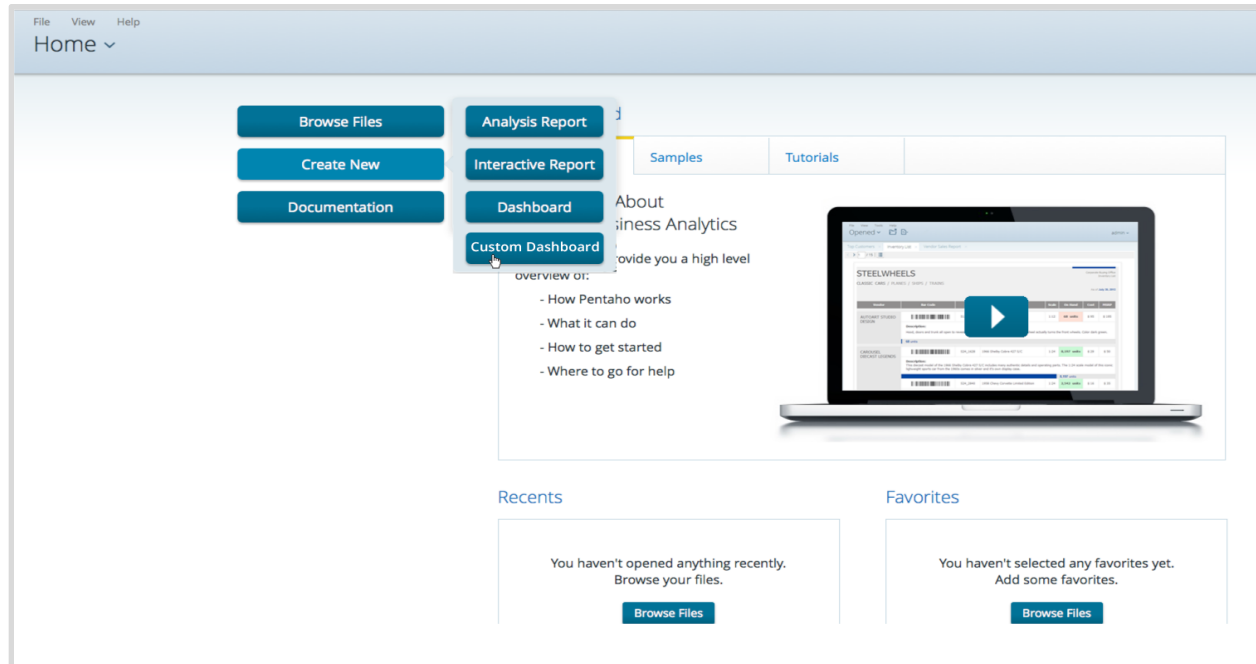
- Including visualizations that can be shared.



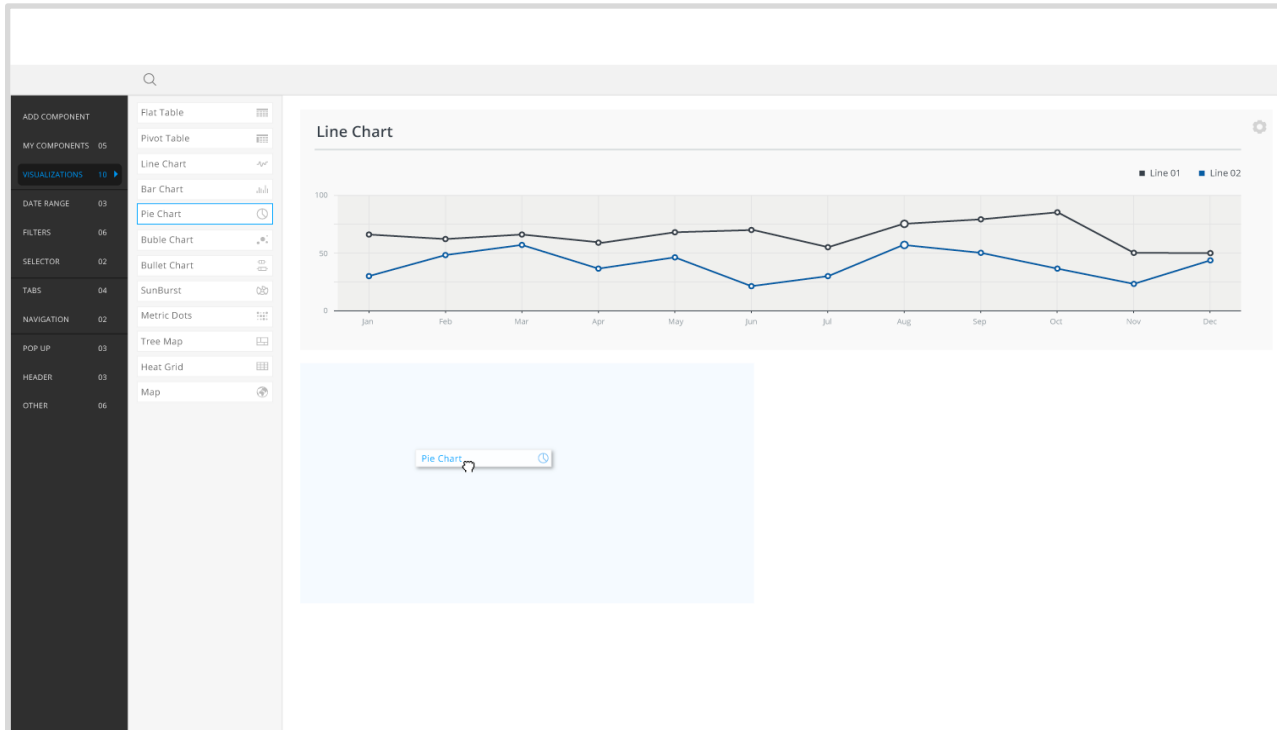
- We're not building a *dashboard designer*.
- That's a concept that doesn't fit our governed story.
- We will build a *dashboard assembler* that combines the governed set of information that was approved for people to work with

- So we'll develop a new, easy-to-use prototype UI to leverage the Ctools capabilities.

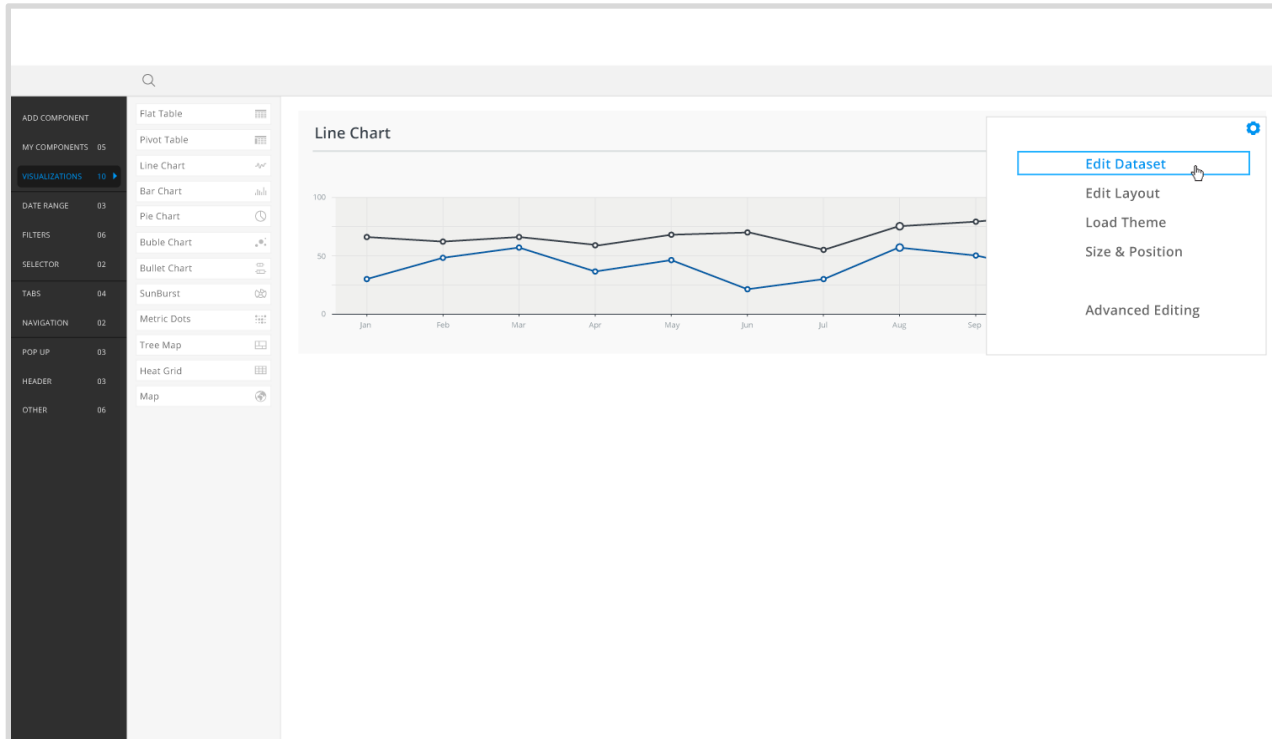
- We'll be able to prototype a new dashboard from within the User Console



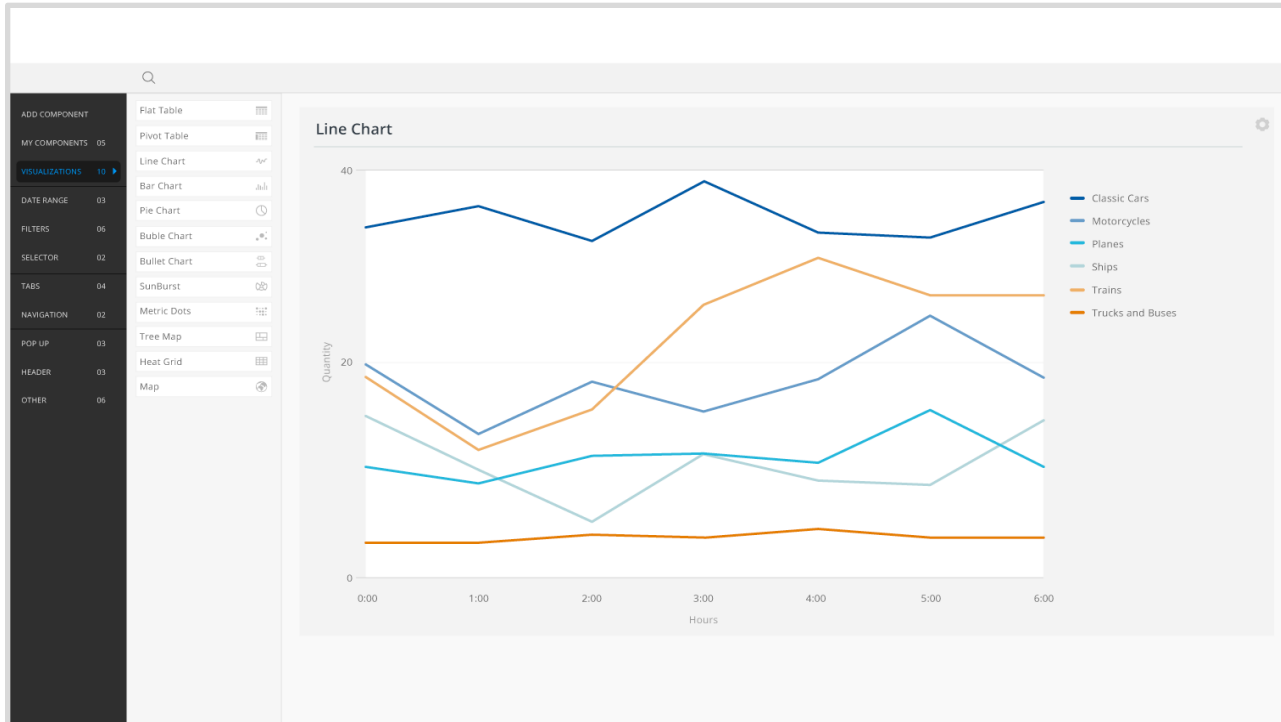
- With an easy drag and drop experience



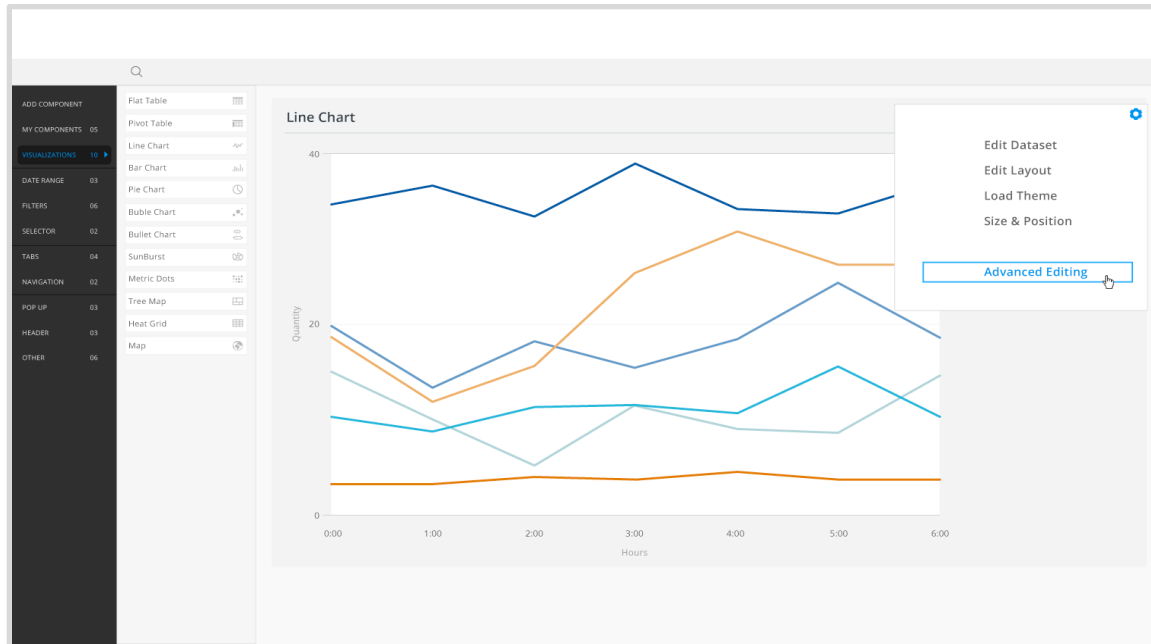
- And configure it to the data we want to analyze.



- Getting to our end result.



- Without losing the capabilities to swap to the advanced Ctools panels, exploring the Art of the Possible.



1. Enabling Ctools Development
2. Embrace Industry Standards
3. Leverage advances in the Platform
4. Improve End user interactions
5. Deliver Reusable Components
6. Better Layout and Design Tools
7. New Ways to Explore Data

- Developer Documentation
 - Delivery of developer documentation as part of Pentaho Developer Center
 - Guarantee public interfaces from release to release for published endpoints
 - Clear deprecation guidelines
- Tech Support and Knowledgebase for Developers
 - Enable Pentaho support to extend to Ctools development
 - Improve samples, best practices and how-to sessions

- RequireJS support (ADDED IN 5.4)
 - Allows for different Ctools elements to be combined on a same page.
 - Component model makes it easier to embed in other apps in a standard way
- Upcoming VizAPI changes
 - Improved support for D3
- Responsive design best practices

- Improved management and governance of Ctools
 - Particularly in a “merged server” context
 - Direct access to Transformations on single server
 - OSGI enable plugins for hot restart, easier development
- Exploit PDI Data Services
 - Direct connects through CDA
 - Improved metadata on transformations to better describe “actions”

- Already making progress with Prompting
 - Single shared prompting experience
 - Allows multiple content to be controlled from a shared prompt
 - Consistent across front end tools
- Under investigation
 - Search enablement
 - “Usage Types” within PDI to automatically generate content

- Creation of Ctools Widgets
 - Break monolithic dashboard paradigm
 - Reusable pieces of content which can be repurposed across dashboards
 - Clear plugin model for datasources
 - High reusability
- Palette approach for reusable elements
 - Collection of "*mini-dashboards*" with security and governance applied
 - Groundwork for an end user dashboard assembler.

- Dashboard Assembly Tool
 - End user content layout
 - Combine raw visualization or mini-dashboard widgets
 - Promote reuse but also self service
- Still based on core Ctools
 - Dashboards assembled become “new” Widgets
 - Developers can start with a dashboard and easily jump into the *art of the possible* that Ctools currently offer

- Bringing pieces of Ctools into PDI
 - Augment current Preview capabilities
 - Allow richer design experience while building on Ctools strength
 - Ensures consistency from data prep to presentation
- New Ctools widget - same experience in a dashboard
 - Tabular data set view
 - NOT an Analyzer replacement, but a different presentation experience with dashboards where Analyzer may not be the best fit

Want to learn more?

- Meet the Experts Session on Visualizations and Reporting



Thank You

Join the Conversation
#PCM15