

Adding Business Intelligence Analytics into RAD Studio Applications



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Presenters



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Agenda

What is a BI platform?

Quick Architectural Wins

Benefits of BI Integration
Web / Dashboard / Open
Innovation

OEM Integration
Pre-build / Deploy /
Remote and local
capabilities

Code Sample

What is a Business Intelligence?

... is the process of creating from **raw data** **actionable Insights** to **support** the **decision** making processes.



What is a B.I. Platform?

BI platforms enable the process of creating informed timely actionable decisions

BI Platform create BI content for users, including multiple components:

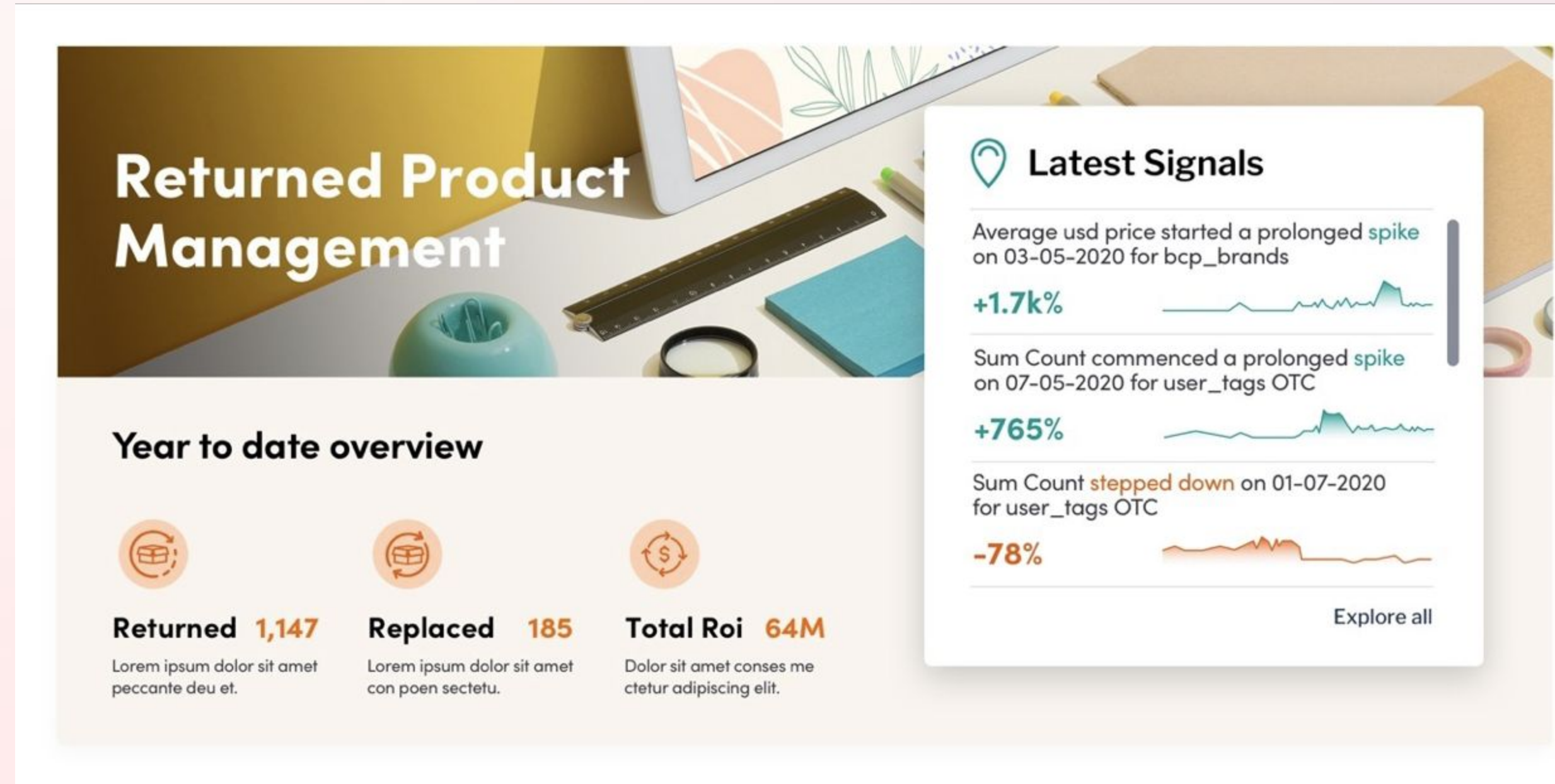
- mechanisms to **connect to data sources**
- the ability to **capture the business rules** about data known as meta-data
- the ability to **securely** generate **data queries** usually through a **drag and drop** interface
- a variety of ways to **present data** queries, for example as reports, charts, dashboards and more
- other features that enable **distribution** of reports, **automated identification of insights** using intelligent algorithms, **natural language** capabilities for asking questions of data or explaining identified insights
- flexible **APIs** to enable BI content to be **embedded directly into applications**



Automated

Automated Discovery

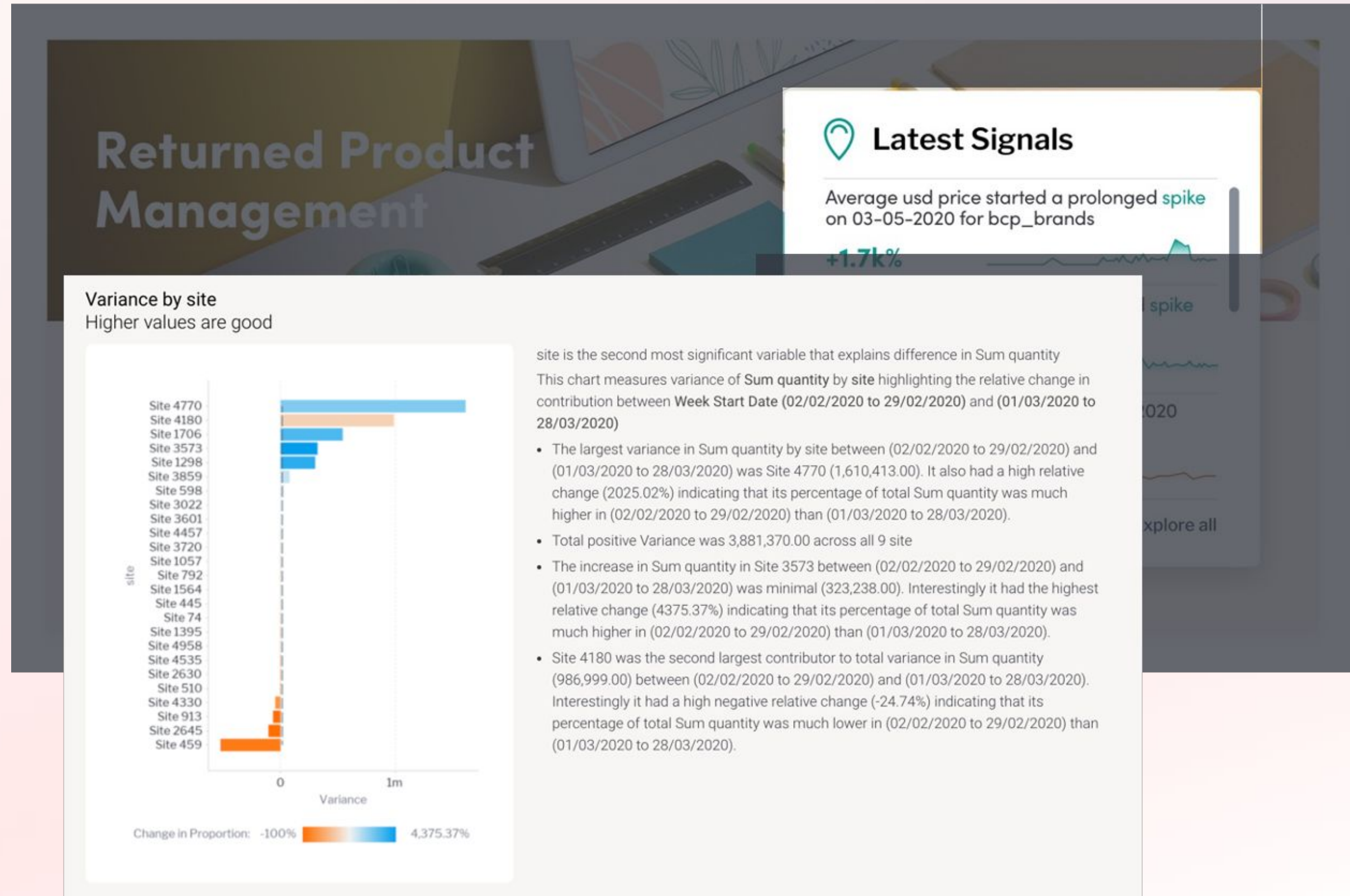
Business metadata
used to detect trends
automatically, making
timely actions
possible



Automated

Automated Discovery

A.I. driven deep insight as you need it automatically generated by the system.



Self Service Analytics

True Self-Service with Guided NLQ

Compare **Units Sold (Sum)** between **This Calendar Quarter (Order Date)** to **Last Calendar Quarter** by **Product Category**

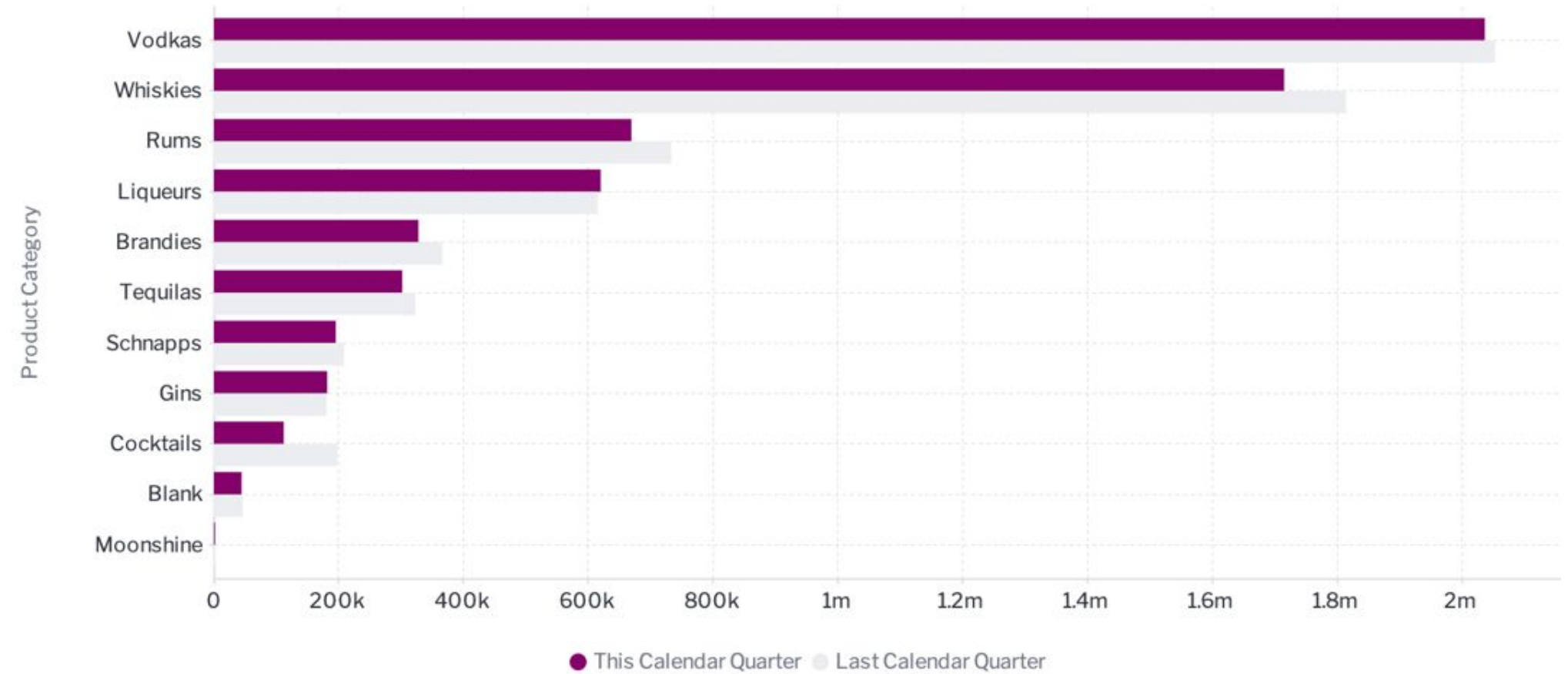
Ask Question

Sum Units Sold This Calendar Quarter compared to Last Calendar Quarter

By Product Category

6.2m

6.5m ▼ -5.1%
Compared to Last Calendar Quarter



Yellowfin User: Ivan Seow Role: 1

Report Data Charts Design Publish













Liquor Sales

Search

Sections: Drag section fields here

Columns: Brand Image, Month Start Date, Brand, Units Sold, Volume Sold

Rows:

Brand Image	Brand	Units Sold	Volume Sold (L)	Monthly Sales	Sales Amount \$
	Crown Royal	1,279,066.00	970,544.20		29,434,051.77
	Black Velvet	2,224,464.00	2,392,118.55		23,646,751.99
	Jack Daniel's	879,849.00	701,205.75		20,334,894.04
	Fireball	1,271,583.00	1,155,727.20		19,027,142.11
	Jim Beam	827,183.00	584,775.70		10,745,373.85
	Jameson	375,112.00	326,703.33		9,765,922.21

Filters: Product Category, Year, Premium Category

Advanced settings

Analysis Style: Co-Display, No Drill, Drill Down, Drill Anywhere, Drill Through

Report Data: Data Source: Liquorio Exasol, View: Liquor Sales

Active Row Limit: 100000

Show Duplicate Records:

Auto Refresh:

Preview Row Limit:

Access Filters: Account Name

411 Rows

Self Service Analytics

Advanced Report Authoring for Operational Reporting

Data Stories & Presentations

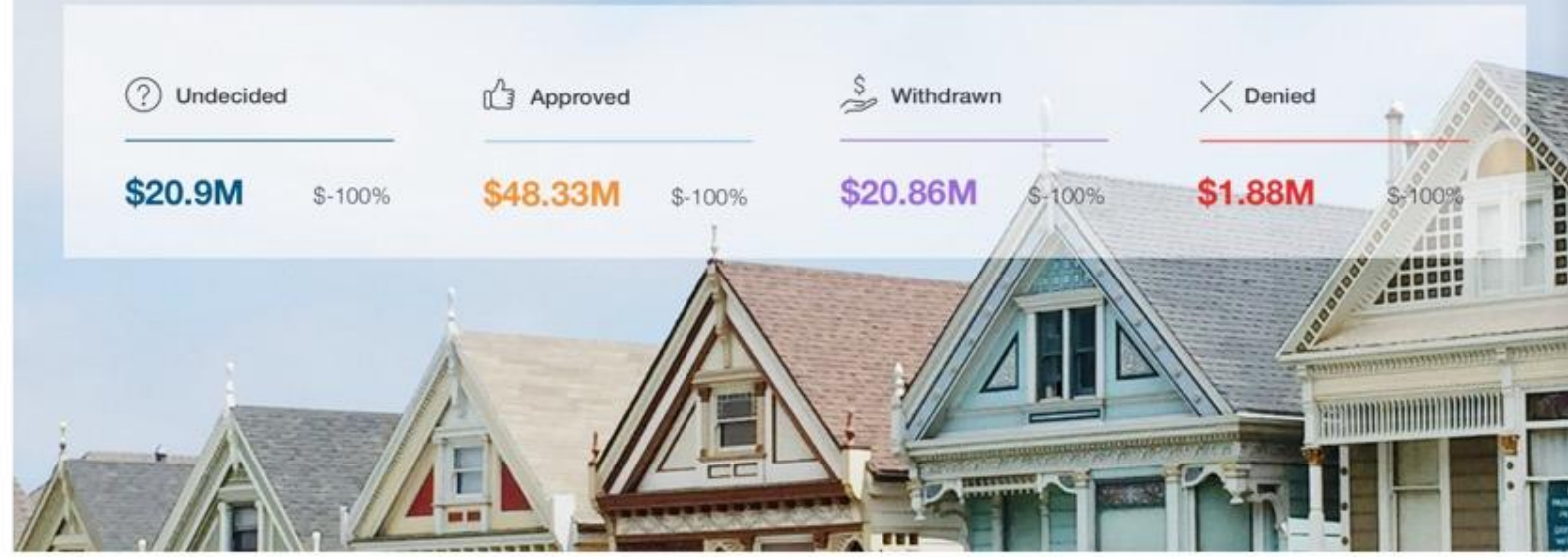
Data-Led Presentations



Q1 Loans Performance Presentation

March 15

Status	Amount	Percentage
Undecided	\$20.9M	\$-100%
Approved	\$48.33M	\$-100%
Withdrawn	\$20.86M	\$-100%
Denied	\$1.88M	\$-100%




Q1 Transactions

Summary of loan performance

Metric	Current Balance
Total Loans	\$1.1B
Total Deposits	\$1.1B

Transaction History



Q1 Pipeline Analysis

Summary of loan performance

Opportunities

Origination Efficiency of Incoming Proposed Loan Opportunities



Why integrate a BI platform with your product?

Win more deals and create competitive differentiation

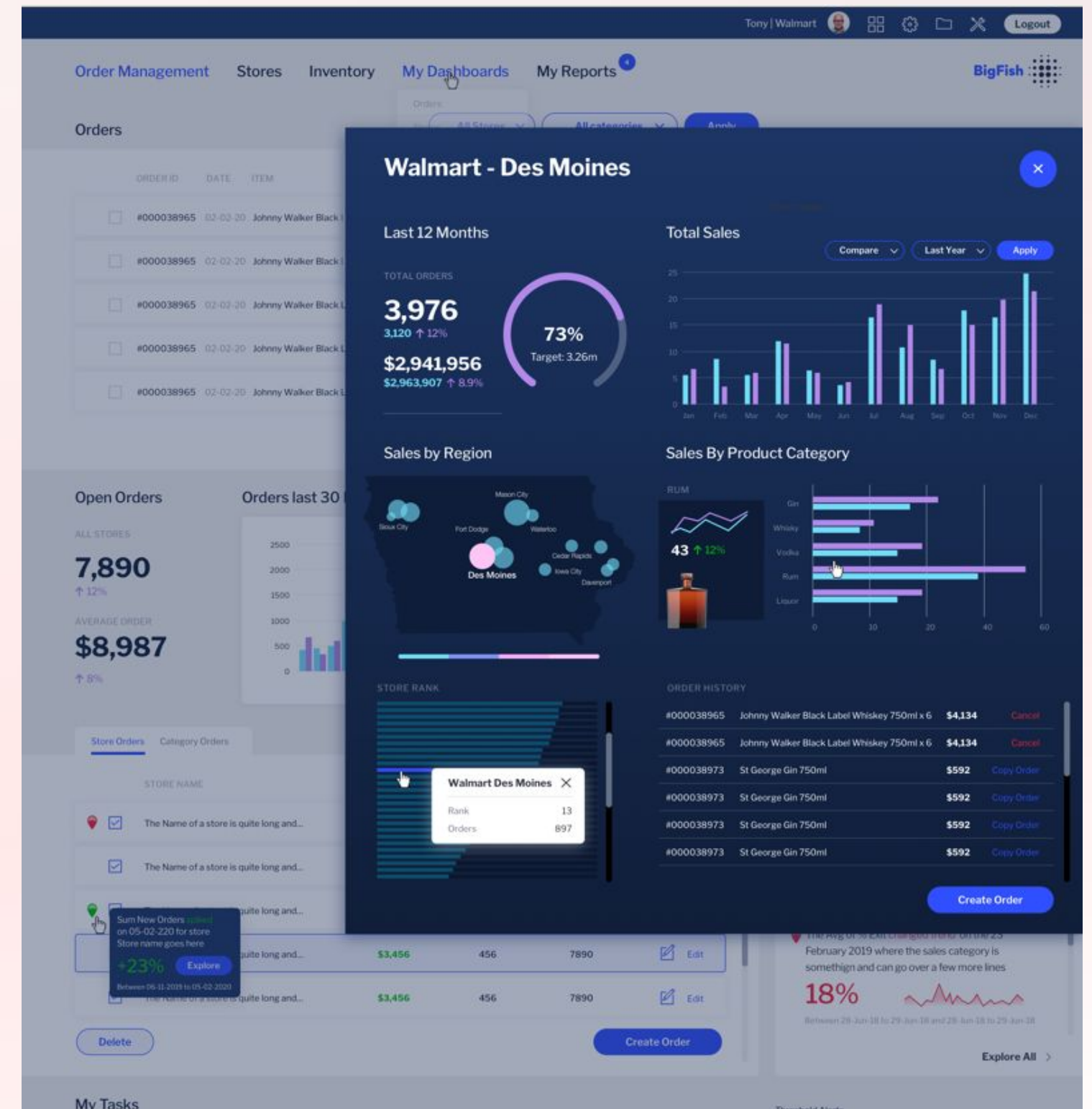
Software buyers are increasingly looking for value add in their applications. Adding BI capability can improve the appeal of your product particularly to executive level buyers as it provides insights to help them manage their businesses better.

Create new revenue streams

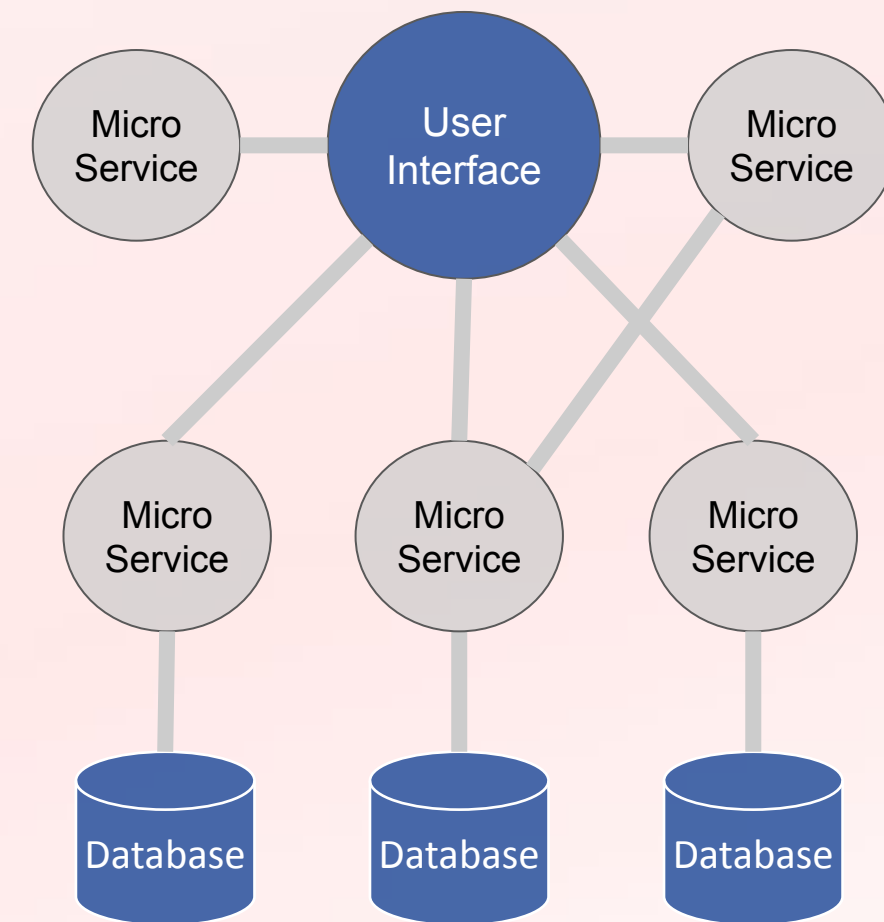
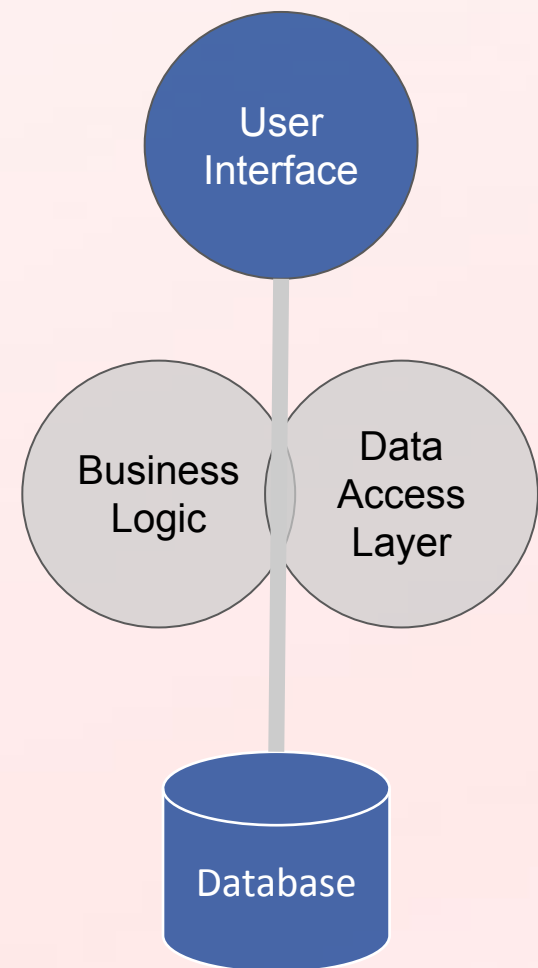
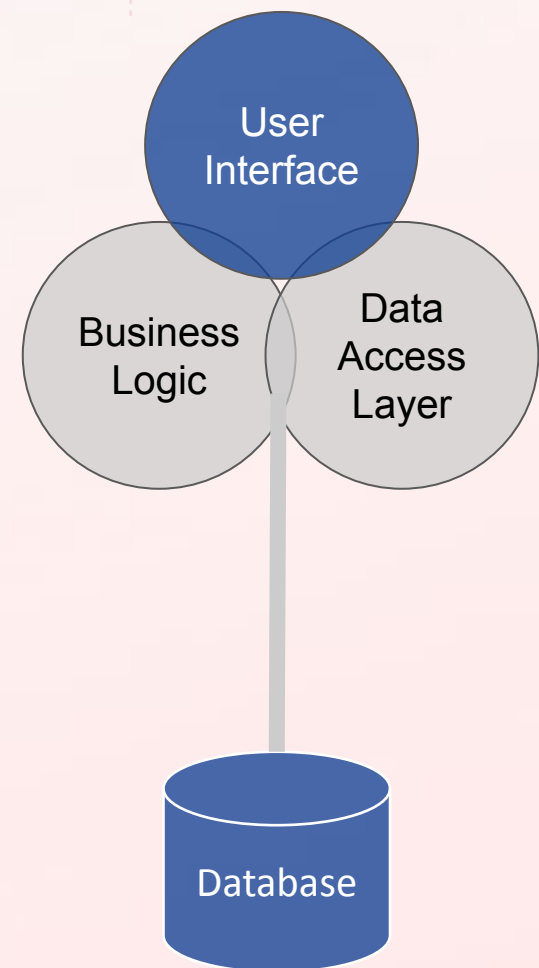
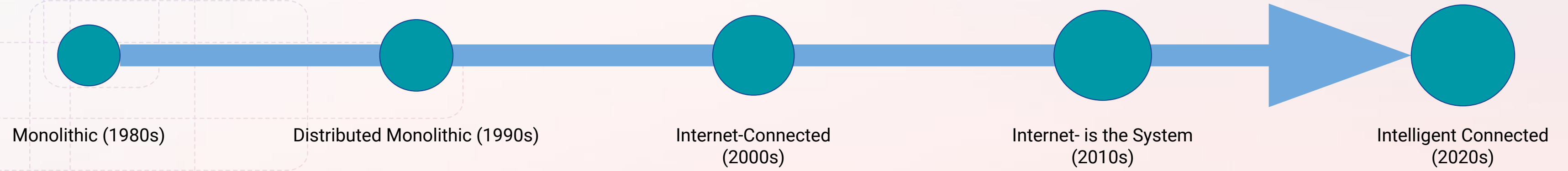
Advanced BI capabilities can be added as an optional product tier that can create new revenue streams from new and existing customers.

Save on development costs

Many product teams spend a lot of development cycles coding solutions to meet the data demands of their customers - for example building data extract, reports or even custom dashboards. BI platforms reduce the development time in building these components and some of the work can be offloaded to the client via self-service capabilities. This frees your team to work on core application features.



System Evolution



Intelligent Connected B.I.

Choice of User Interface

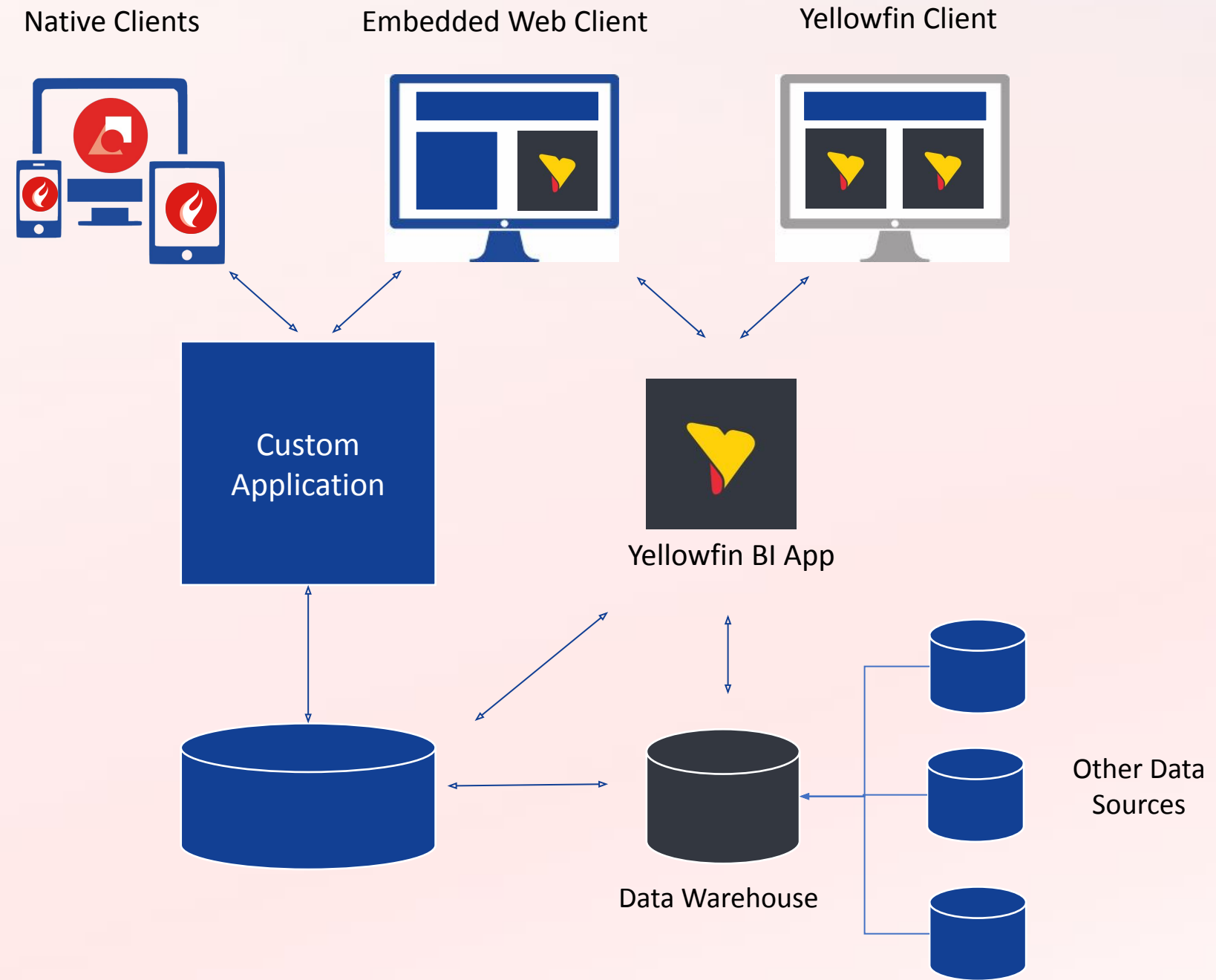
Local, Remote, Dashboards etc

Business Logic & Data Access Layer

Rapidly expand your system with fully featured BI intelligence

Data Layer

Use existing data layers, and also draw in non-structured data with data automation that you can report on inside you existing applications



Benefits of B.I. Integration

Make your users more efficient and improve the value of your product

Advanced BI capabilities provide better information and insights to your user base, enabling them to be more efficient and make better decisions. Further, integrating BI directly into your application workflows (known as contextual embedding) provides users the right information at the exact point a user needs it.

Simplify the architecture for clients

Combining BI capabilities removes the need for customers to create their own solutions, for example using data extracts to build Excel spreadsheets, or feeding your data into another BI tool.

Create greater product stickiness

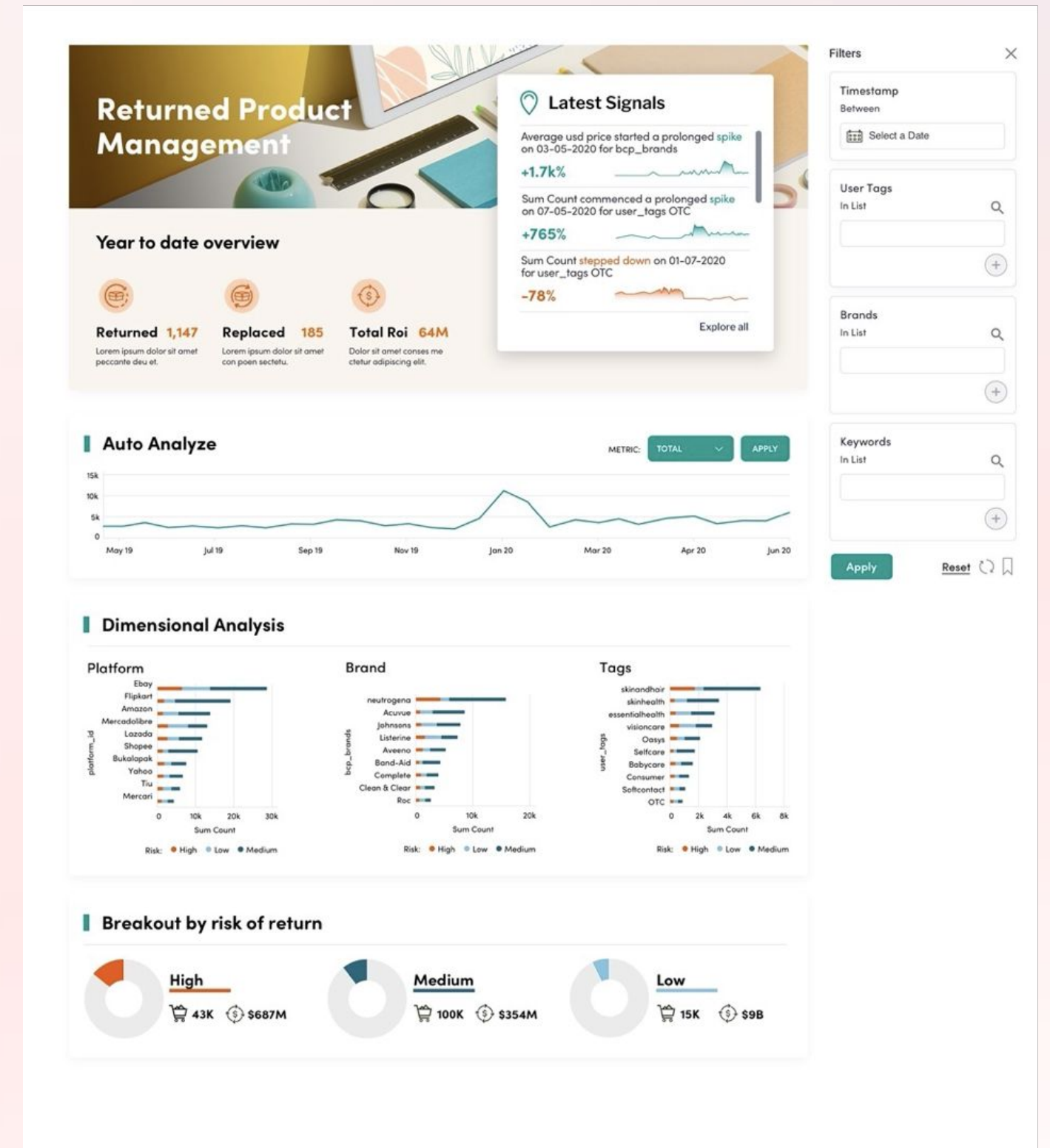
Improved value add reduces the likelihood of churn. Customers who make use of self-service capabilities of the platform by building their own content are less likely to move to another platform at the risk of throwing away their investment in your product.

Reach new user personas

Aggregated data visible through reports and dashboards can broaden the user base of the platform to include more management and executive personas.

Get to ROI Faster!

Create applications or application modules fast and package in a way that increases your revenue (value) potential



Demo

The screenshot displays the Yellowfin dashboard interface. On the left is a navigation sidebar with options: Settings, Reports, Users, and Single Sign On. The main header includes the Yellowfin logo, a menu icon, and 'Access to: Dashboard'. The page title is 'Sales Performance' and the browser tab is 'Yellowfin Web Embedded'. A 'Share' button is visible in the top right of the dashboard area.

Invoice Summary

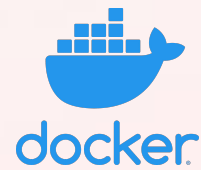
- Invoiced:** \$757m (Target: \$80m)
- Demographic:** Legend includes Luxury (green), Family (light green), and Adventure (yellow-green).
- Gender:** Legend includes Female (red) and Male (orange).
- Region:** Legend includes Asia (yellow), Europe (orange), and NA (light orange).
- Costs:** \$50m

Line Chart: Shows 'Invoiced' revenue from Jan,13 to Jan,24. The y-axis ranges from 0 to 60m. The chart shows several peaks, with the highest reaching approximately 60m in late January 2018.

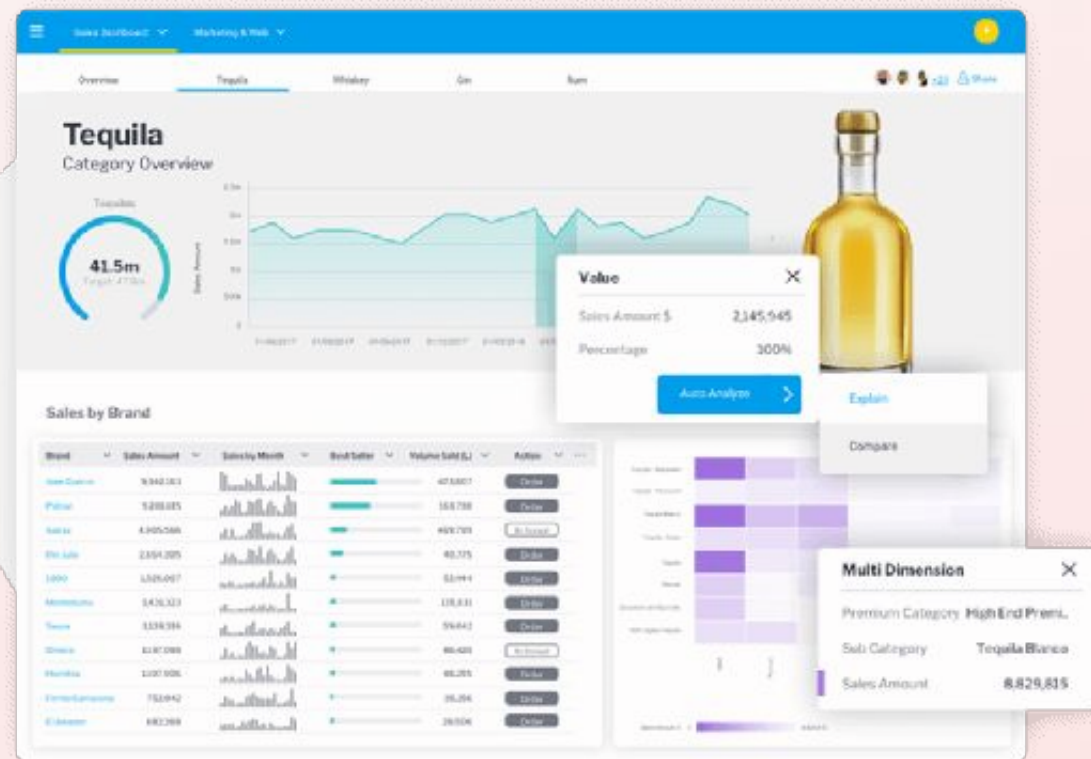
Region Revenue by Year and **Performance by Region** sections are partially visible at the bottom, with a table header including columns for Year, Camp Region, Invoiced, and % Max Invoiced.

Quick Start with Docker...

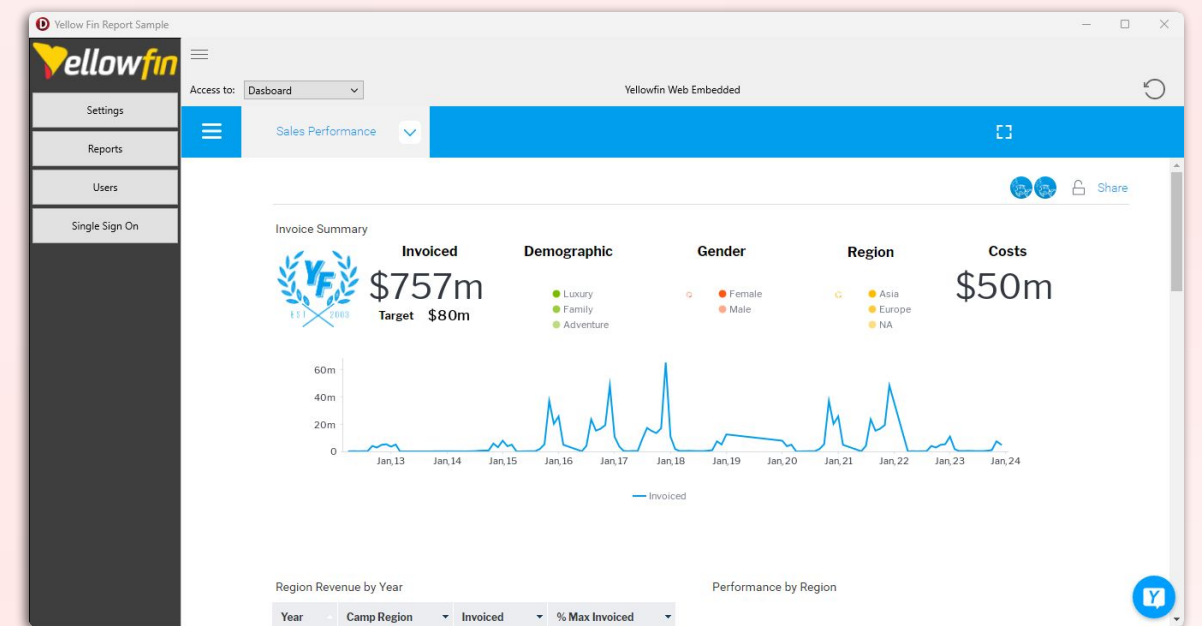
1 `docker run -p 9999:8080 yellowfinbi/yellowfin-all-in-one`



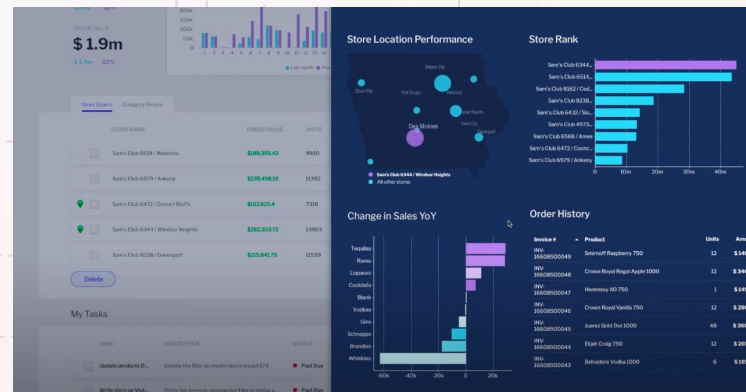
2 Initialize Yellowfin Server



3 Use Yellowfin Embedded Sample



Learn More...



Embedded Analytics Overview

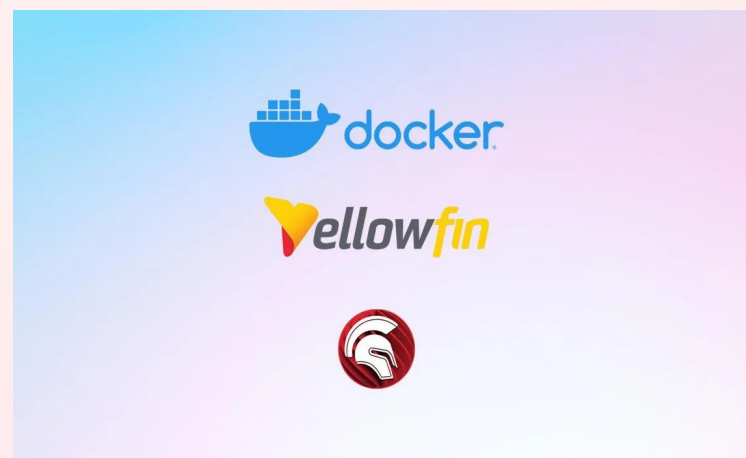
https://www.youtube.com/watch?v=_VRLdnfjZwk



Sample code for Integrating Business Analytics, powered by Yellowfin, inside Delphi Applications.

<https://blogs.embarcadero.com/sample-code-for-integrating-business-analytics-powered-by-yellowfin-inside-delphi-applications/>

<https://github.com/DelphiABall/Yellowfin>



Deploy Yellowfin using Docker and connect it to Delphi apps

<https://blogs.embarcadero.com/deploy-yellowfin-using-docker-and-connect-it-to-delphi-apps/>

Q&A



RAD Studio® 11.3

