

Power BI vs. Real-Time Dashboards

It's Not Just About Looks



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<https://aka.bi/follow>



<https://aka.bi/slides>



<https://dcode.bi>



<https://kql.how>





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 porcubi





O'REILLY®

Microsoft Fabric Analytics Engineer Associate Study Guide



Hands-on Practice
and Expert Tips for
Acing the DP-600
Certification Exam

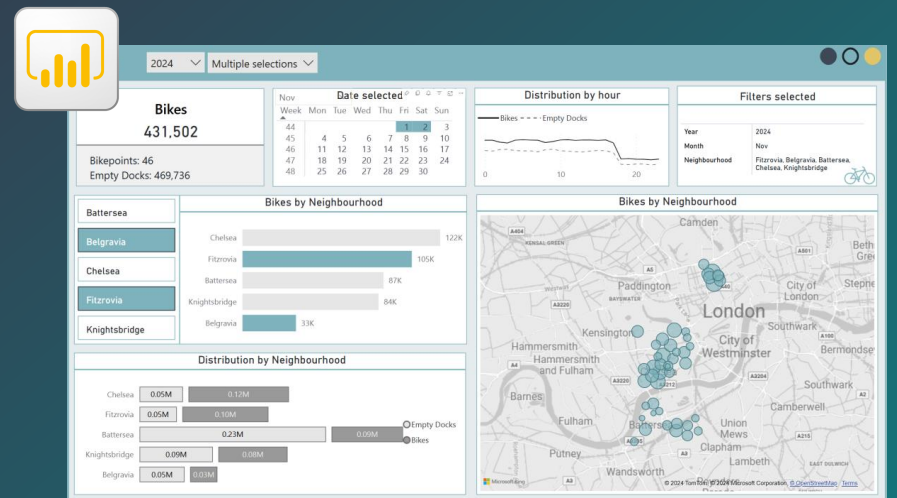
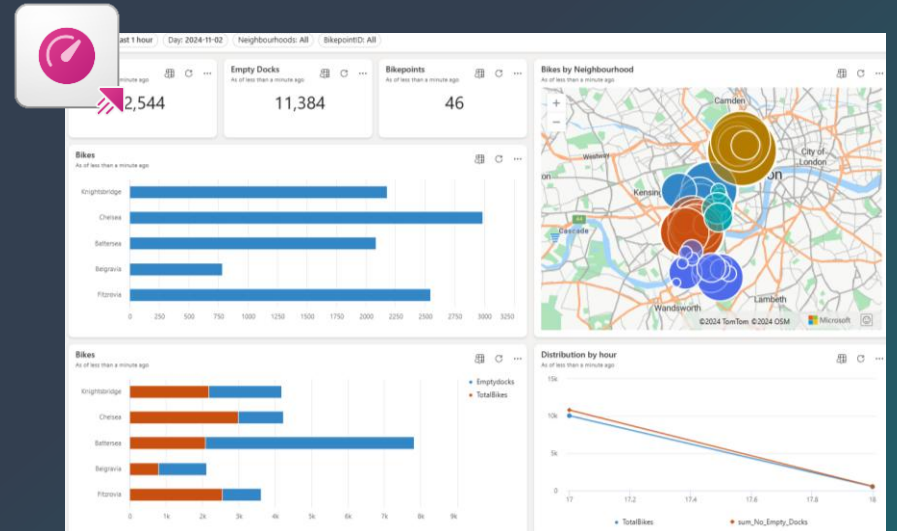
**Early
Release**
RAW &
UNEDITED

Brian Bønck & Valerie Junk



Real-Time vs Power BI

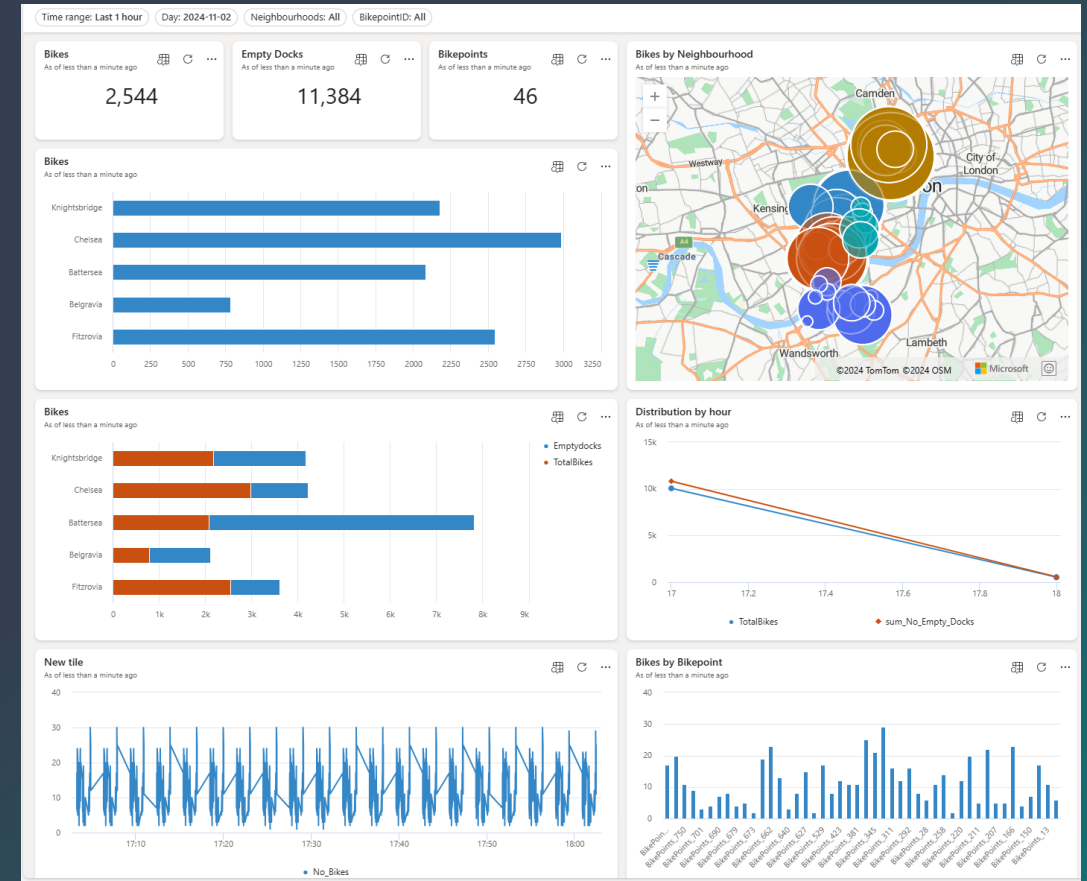
- **Power BI** and **Real-Time Dashboards** are both great options, each designed for different types of data needs and scenarios.
- Power BI: Built for deep insights, complex transformations, and interactive reporting.
- Real-Time Dashboards in Fabric: Ideal for event-driven, near real-time monitoring with immediate data updates and alerting.





Real-Time Dashboard

- “Always on” – continuous data tracking
- High-frequency data updates
- Near real-time alerting
- Licensing: Fabric Capacity
- Perfect for monitoring any scenario with constantly updating data.

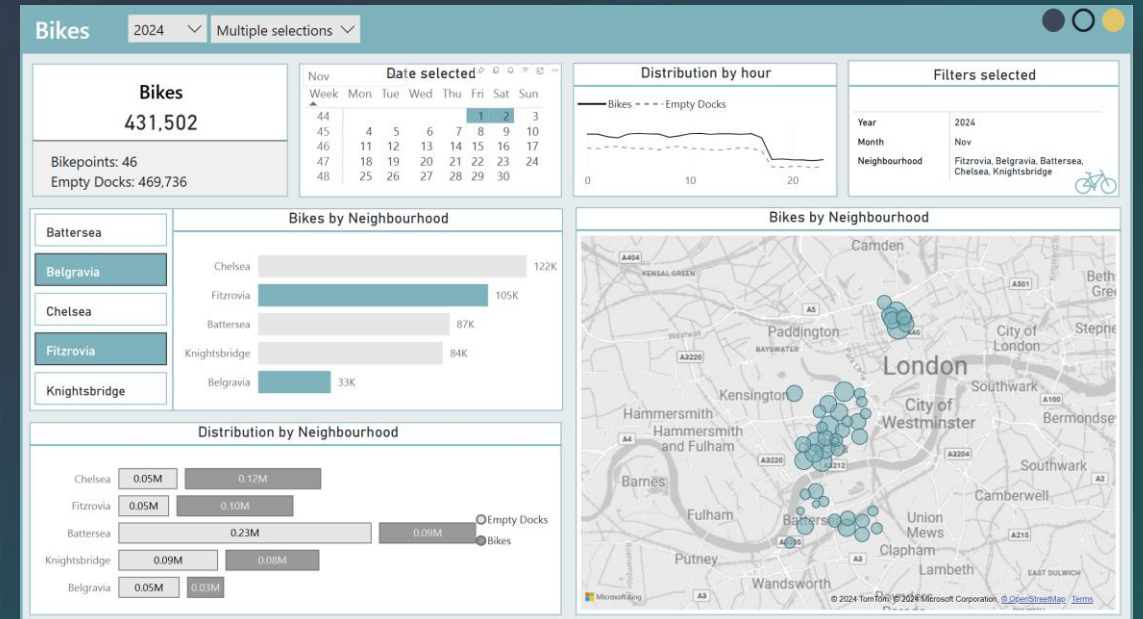
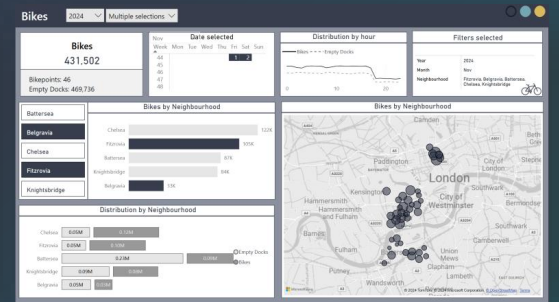
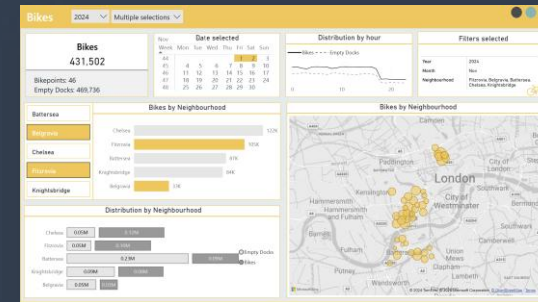




Power BI Report

- User experience (tailored insights)
- Easy Interaction & filter selection
- DAX
- Data visualization

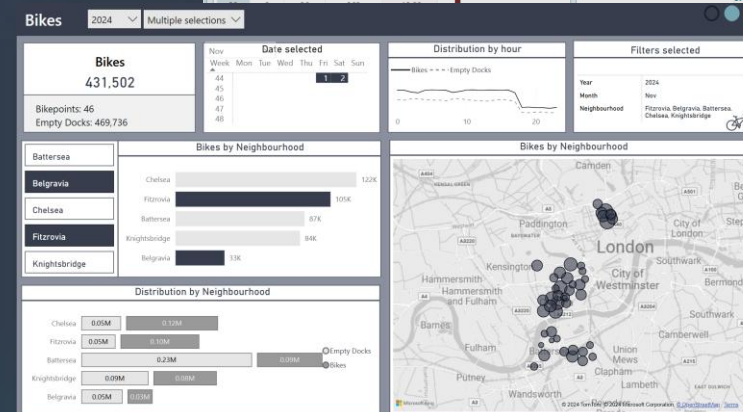
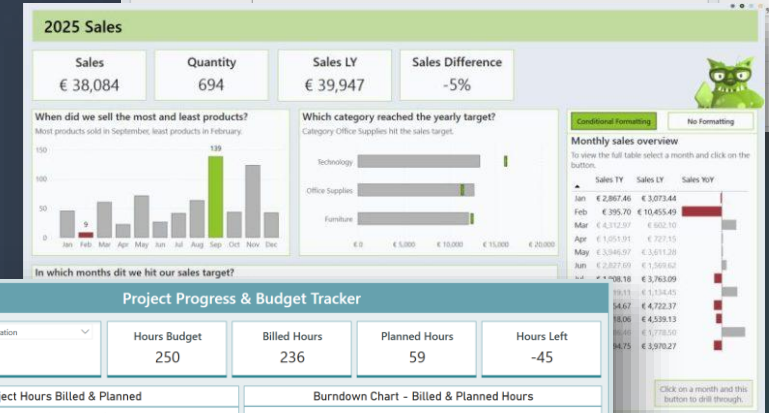
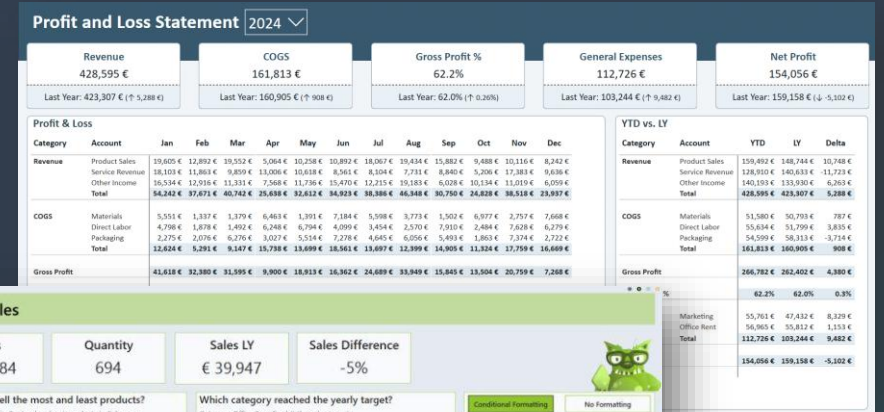
Licensing: Pro, PPU, E5 or F64+





Use Cases

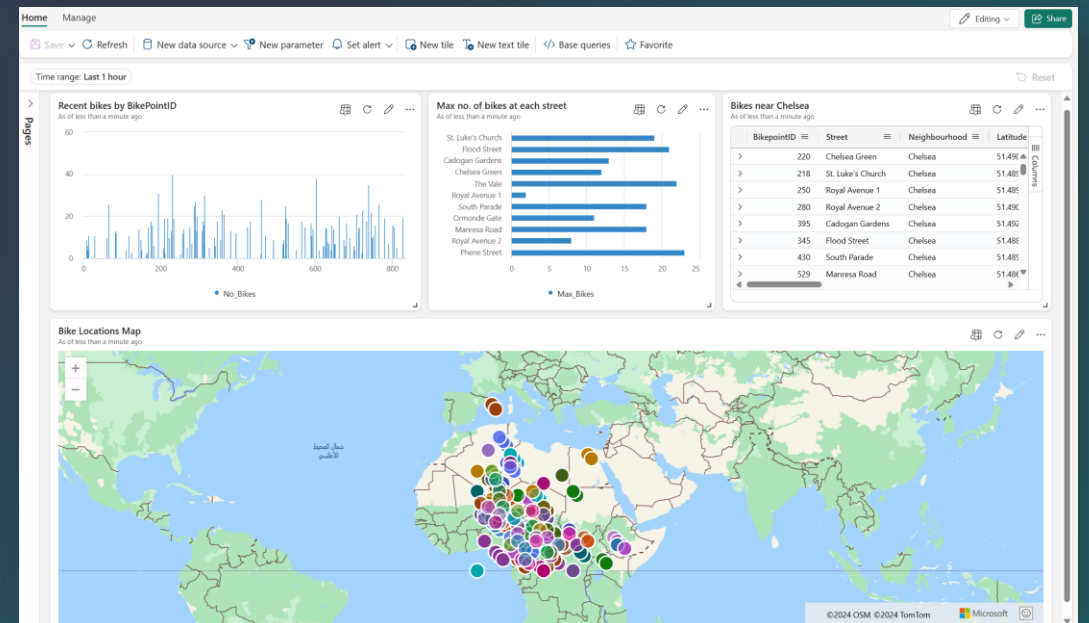
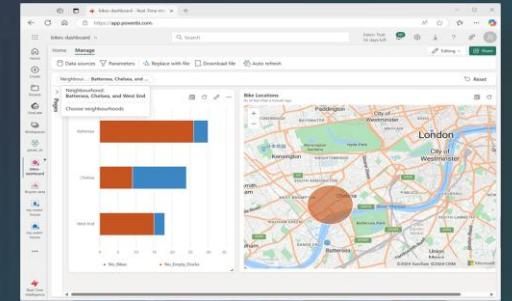
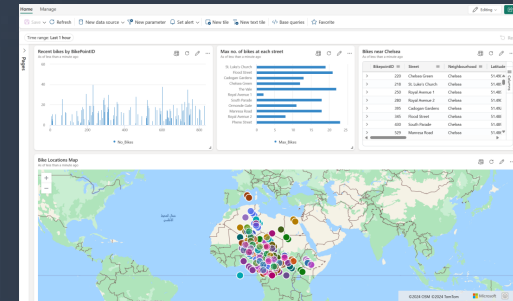
- (In depth) Data Analysis
 - Financial Analysis
 - Sales & Marketing
 - Human Resource Analysis
 - Supply Chain Optimization
 - Compliance
- What if Analysis
- Patterns & Trends





Real-Time Dashboard

- Visuals build for speed
- Manual interaction and filtering
- KQL
- Data insights and actions



Free – only consumes capacity units



Use Cases

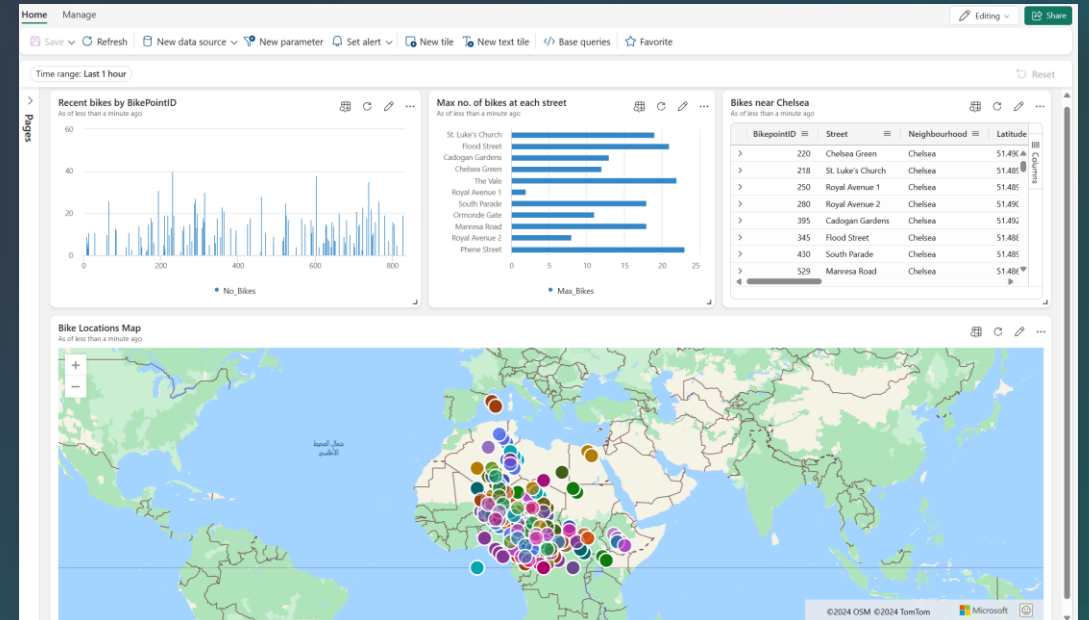
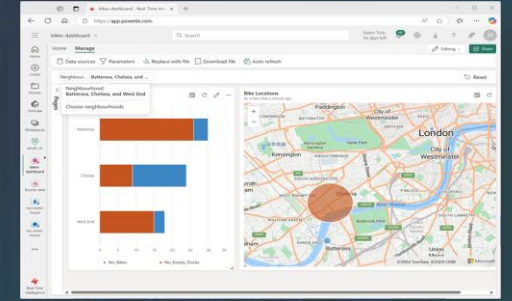
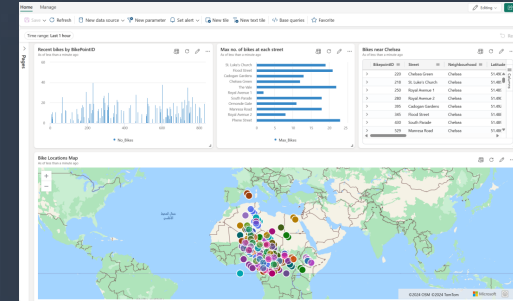
- Short time to insights
 - Immediate status of trends and data points
 - Near real-time analytics
 - Outlier detection and action
 - Graph analysis
 - Telco, windmills, racing etc.
- Historical trends
- Windowing





User Experience

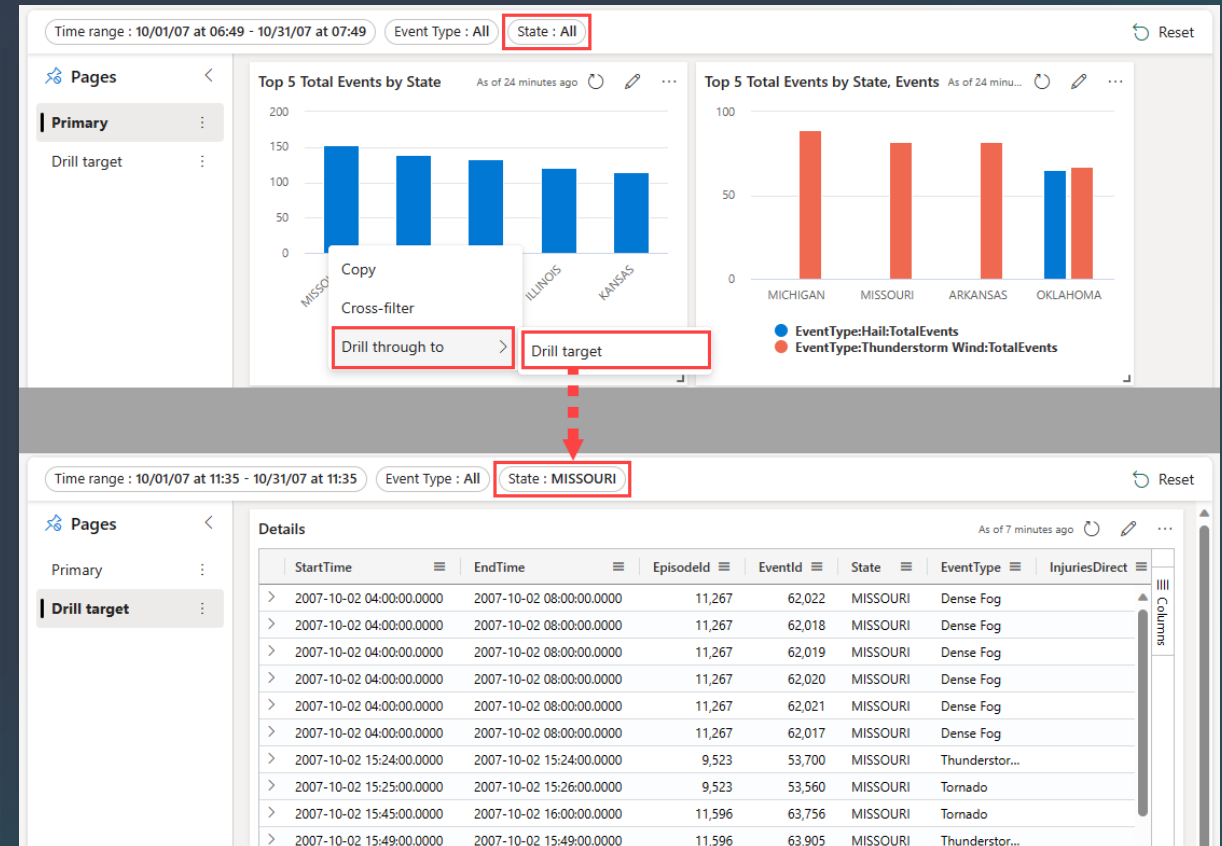
- Fixed reporting with fixed layouts
- Limited set of standard visuals
- Plotly extension for Python based reporting
- Built-in visuals at query time
- Cross filtering must be done manually





Interaction & filter selection

- All filters must be created manually
- Extensive date/time filtering
- Drill through options





KQL (& Dataviz)

- Datasets somewhat reusable
- Limited set of standard visuals
- Some conditional formatting (colours and icons)

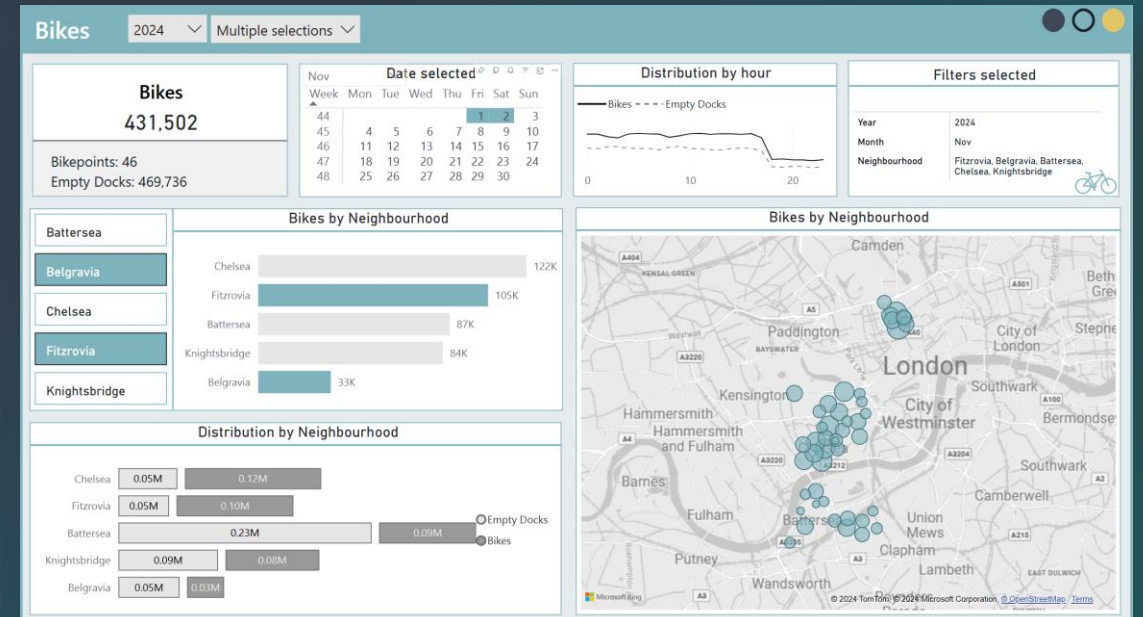
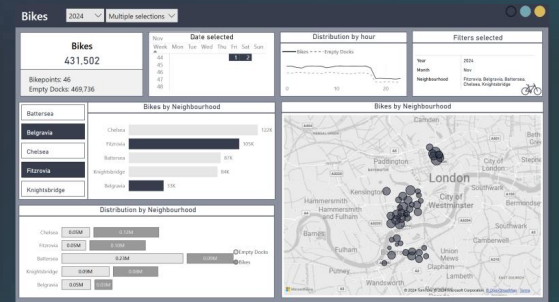
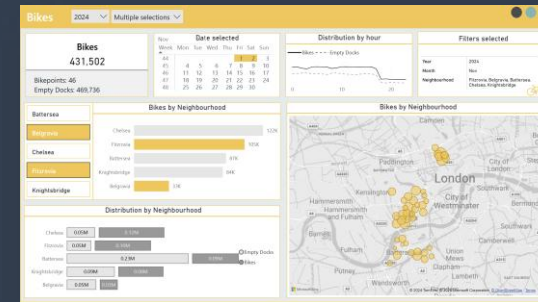
| | | |
|-------------------------|------------------------|------------------|
| Cold/Wind Chill ⚠ 17 | Excessive Heat 6 | Flash Flood 1 |
| Heat ⚠ 20 | Heavy Rain 1 | High Wind 1 |
| Marine Strong Wind 1 | Thunderstorm Wind 7 | Tornado ⚠ 31 |

| EventType | Count |
|-----------------------|-------|
| > Cold/Wind Chill | 17 |
| > Excessive Heat | 6 |
| > Flash Flood | 1 |
| > Hail | 1 |
| > Heat | 20 |
| > Heavy Rain | 1 |
| > High Wind | 1 |
| > Hurricane (Typhoon) | 1 |
| > Marine Strong Wind | 1 |
| > Thunderstorm Wind | 7 |
| > Tornado | 31 |
| > Wildfire | 8 |
| > Winter Weather | 2 |



User Experience

- Personalize reports
- Visuals can be created for a specific audience
- Easy to use and interactive





- Bikes by Neighbourhood**

| Neighbourhood | BikePoint | Street | Bikes | Empty Docks | Time |
|---------------|-----------|----------------|-------|-------------|----------|
| Knightbridge | 166 | Seville Street | 166 | 0 | 09:06:34 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 09:09:38 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 09:12:42 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 09:15:47 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 09:18:51 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 09:21:55 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 09:25:00 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 09:28:04 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 09:31:08 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 09:34:12 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 09:37:16 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 09:40:20 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 09:43:24 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 09:46:29 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 10:38:45 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 10:41:49 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 10:44:54 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 10:47:58 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 10:51:02 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 10:54:07 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 10:57:11 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 11:00:15 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 11:03:19 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 11:06:23 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 11:09:27 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 11:12:31 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 11:15:37 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 11:18:42 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 11:21:46 |
| Knightbridge | 166 | Seville Street | 166 | 0 | 11:24:50 |
| Total | CCS | Seville Street | 39331 | 17006 | 11:27:54 |

Bikes by Street

| Street | Bikes |
|-------------------|-------|
| Phene Street | 5.9K |
| Flood Street | 5.4K |
| St. Luke's Church | 5.1K |
| The Vale | 4.5K |
| Mannisa Road | 4.5K |
| South Parade | 3.2K |
| Cadogan Gardens | 3.2K |
| Chelsea Green | 2.6K |
| Ormonde Gate | 2.4K |
| Royal Avenue 2 | 2.1K |
| Royal Avenue 1 | 0.5K |

Empty Docks

| Street | Empty Docks |
|-------------------|-------------|
| Ormonde Gate | 4.1K |
| Flood Street | 3.4K |
| Royal Avenue 1 | 2.2K |
| The Vale | 1.9K |
| South Parade | 1.6K |
| Cadogan Gardens | 1.4K |
| Chelsea Green | 0.8K |
| Royal Avenue 2 | 0.6K |
| Phene Street | 0.5K |
| Mannisa Road | 0.3K |
| St. Luke's Church | 0.2K |

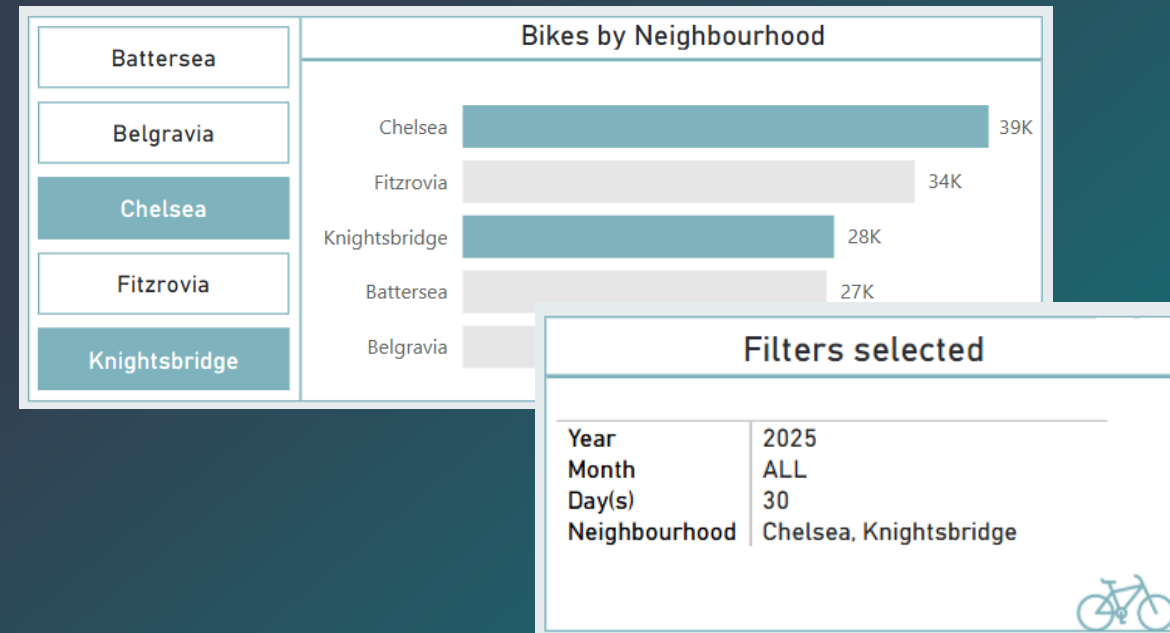
Empty Docks

| Street | Empty Docks |
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| Ormonde Gate | 4.1K |
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| The Vale | 1.9K |
| South Parade | 1.6K |
| Cadogan Gardens | 1.4K |
| Chelsea Green | 0.8K |
| Royal Avenue 2 | 0.6K |
| Phene Street | 0.5K |
| Mannisa Road | 0.3K |
| St. Luke's Church | 0.2K |



DAX (& Dataviz)

- DAX measures (reusable)
- Wide range of native visuals (bar, line, pie, KPI, maps).
- Conditional formatting for action driven storytelling.



Demo

Feature comparison

Real-Time vs Power BI

| Feature | Real-Time Dashboards | Power BI |
|---------------|-----------------------------|--------------------------|
| Refresh Rate | Near real-time (always on) | Scheduled refresh |
| Interactivity | Limited interactive | Interactivity |
| Visualization | Limited | Highly customizable |
| Alerting | Teams, email or Fabric item | Teams & email |
| Use Case | Event data, traffic, IoT | In depth & action-driven |

POWER BI vs REAL-TIME DASHBOARDS



FILTERING



COST



VISUALIZATION



DATA ACCESS



SHARING



REAL-TIME
DASHBOARD

DYNAMIC TIME
RANGE
FILTERING

THE
EVENTHOUSE
COST IS THE
ONLY CU USAGE

LIMITED
GALLERY. CAN
USE PLOTLY FOR
CUSTOM VIZ

ONLY KQL DATA
AND IN "DIRECT
QUERY"

SHARING
REQUIRES
ACCESS TO THE
KQL DATA



POWER BI
REPORT

EASY FILTER ON
EVERYTHING

Power BI
Licences

RICH GALLERY
WITH EXTENSIVE
CUSTOMIZATION
CAPABILITIES

IMPORT, DIRECT
QUERY, DIRECT
LAKE

EASY SHARING
BOTH INTERNAL
AND EXTERNAL

The two tools are complimenting each other and have different purposes

When use what?

**When use
what?**

| Question | Tool |
|----------------------------------|------------------------|
| • Real-time updates? | • Real-Time Dashboards |
| • In-depth exploration? | • Power BI |
| • Alerting critical? | • Real-Time Dashboards |
| • Complex, multi-layered report? | • Power BI |

Try it yourself!

- 8-step tutorial with sample data
- Create a Real-time dashboard
- Import results in Power BI



<https://learn.microsoft.com/fabric/real-time-intelligence/tutorial-introduction>

Takeaway

Real-Time Dashboards

- Always on, constantly changing
- Events, IoT sensors, Traffic
- High-frequency data updates



Power BI

- Strategic and Detailed Analysis
- In-depth data exploration with advanced visualizations and filtering



Have you seen the dragon?



Help him!

Thank you



Session eval ↘

