While you wait...

Why not let us know what topics you'd like us to cover next?

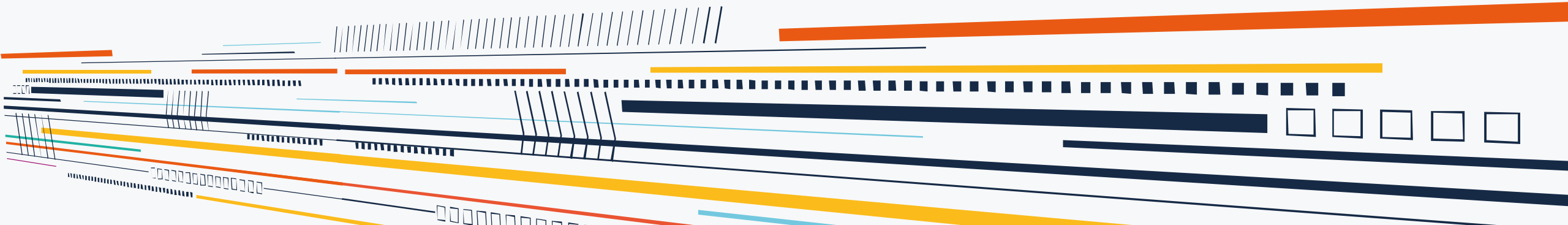
Take the short survey at:

squaredup.com/topics

SquaredUp

Coffee Break Webinar Series

Tuning the SCOM Data Warehouse



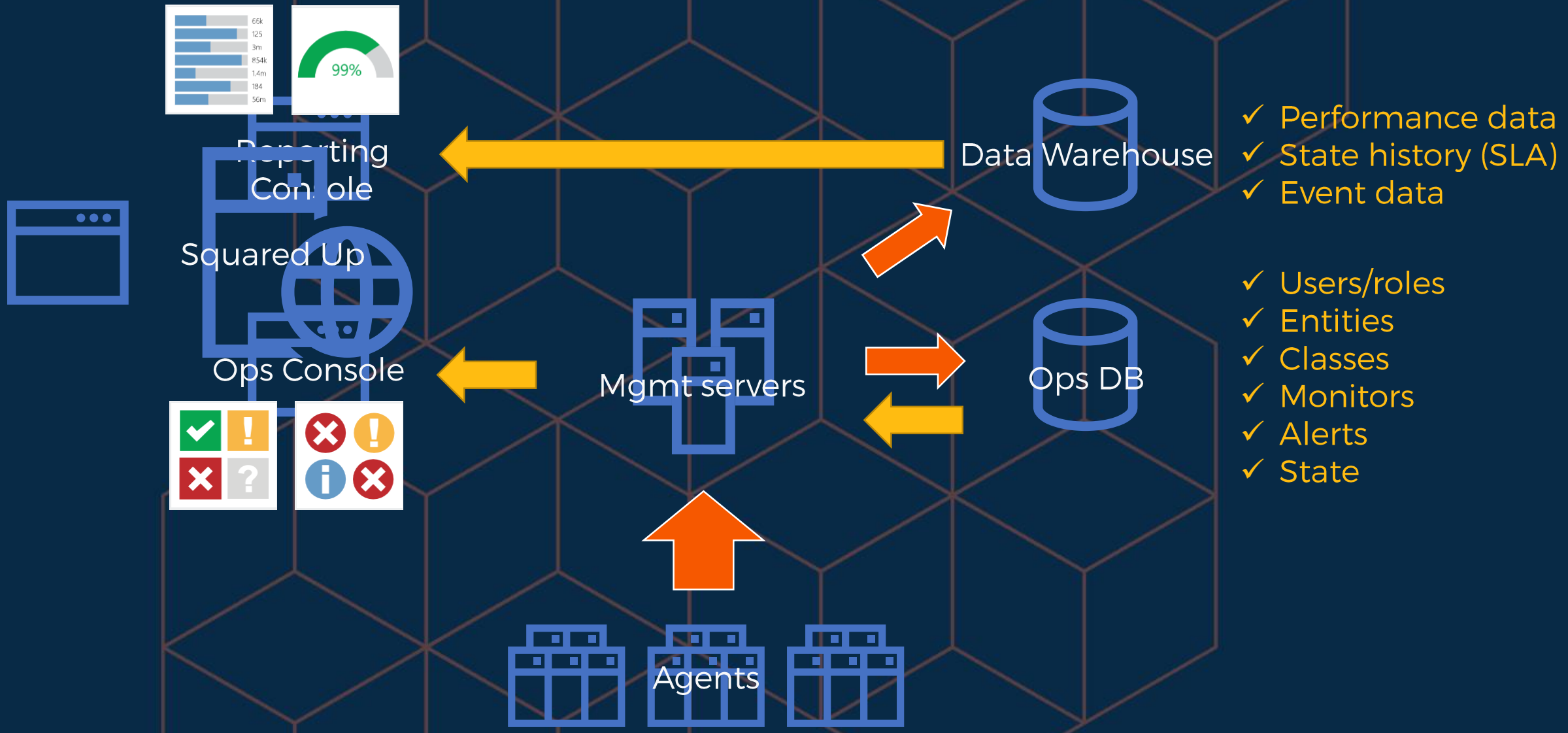
Topic

How to get the most out of the SCOM Data Warehouse

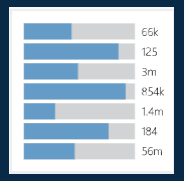
Discussion points:

- SCOM + Squared Up Architecture
- 5 point plan for DW tuning
- Useful resources and SQL queries

SCOM + Squared Up Architecture



The 5 point plan



Performance data is one of the most valuable aspects of SCOM

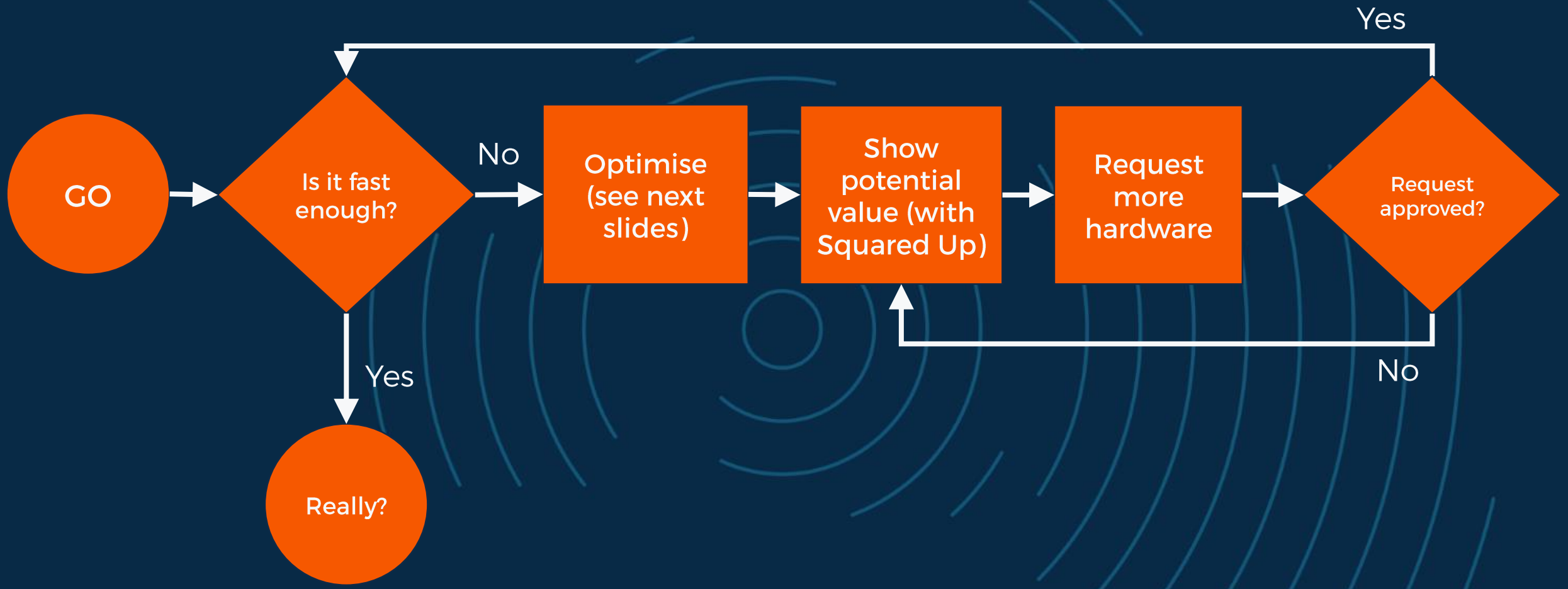
Make sure your DW is tuned and your performance tiles optimized

The 5 things you need to consider for optimal DW performance:

1. Sizing
2. Configuration
3. Data in
4. Data retention
5. Data out

Sizing

Sizing in the real world



Configuration

The two resources you must follow:

- SQL 2012 and System Center 2012 R2 Database Tweaks
  - https://gallery.technet.microsoft.com/SQL-Server-guide-for-8584c403
  - https://gallery.technet.microsoft.com/SQL-2012-and-System-Center-553b5161
- System Center Operations Manager Field Experience
  - https://download.microsoft.com/DOWNLOAD/8/2/8/828C05A2-E6A0-436A-9AE1-704A8005E355/9780735695825.PDF

Then monitor using Tao Yang's Community resources:

- OpsMgr 2012 Data Warehouse Health Check Script
  - http://support.squaredup.com/solution/articles/213715-operations-manager-2012-data-warehouse-health-check-script
- Self Maintenance Management Pack
  - https://blog.tyang.org/2015/09/16/opsmgr-self-maintenance-management-pack-2-5-0-0/

Data In

Common sources of high load

Flip-flopping monitors

- Use Kevin Holman's query
  - https://blogs.technet.microsoft.com/kevinholman/2009/12/21/tuning-tip-do-you-have-monitors-constantly-flip-flopping/

High frequency performance collection rules

- `SELECT TOP 50 r.RuleSystemName, Count(*) AS Count FROM perf.vPerfRaw AS p JOIN vPerformanceRuleInstance AS pri ON p.PerformanceRuleInstanceRowId = pri.PerformanceRuleInstanceRowId JOIN vRule AS r ON pri.RuleRowId = r.RuleRowId GROUP BY r.RuleSystemName ORDER BY Count DESC`

Event data

- `SELECT TOP 50 r.RuleSystemName, Count(*) AS Count FROM Event.vEvent AS e JOIN Event.vEventRule AS er ON e.EventOriginId = er.EventOriginId JOIN vRule AS r ON er.RuleRowId = r.RuleRowId GROUP BY r.RuleSystemName ORDER BY Count DESC`

Data Retention

DW stores data in three forms:

- Raw
- Hourly ← Hourly performance data can become huge – typically 33% of DW size
- Daily

Two problems

- Large storage requirement
- Querying such a large data set puts load on IO and fills memory buffer

Recommendations

- Run Kevin Holman's script
  - https://blogs.technet.microsoft.com/kevinholman/2010/01/05/understanding-and-modifying-data-warehouse-retention-and-grooming/
- Consider reducing hourly retention

Data Out

When using the performance tile, carefully choose your aggregation

- Raw: slow
- Hourly: fast
- Daily: fastest

Recommendations

- Bar chart (especially with top N option) should use hourly/daily where possible
- For large groups (>100 objects) use hourly/daily where possible

Timeouts

- Timeout is 30 seconds
- It cannot be configured
- If queries are taking > 30 seconds, the query is not working as expected!

Coffee Break: Resources

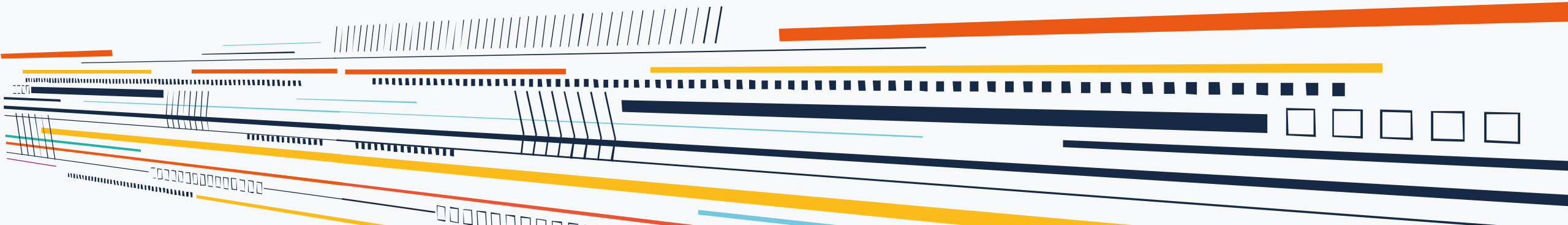
Let us know what you'd like us to cover:
squaredup.com/topics

See what's coming up next:
squaredup.com/coffee-break-series

Recordings and slides published via
squaredup.com/blog

YouTube playlist for series
https://www.youtube.com/playlist?list=PLJNXoiGgmTEu3yZRGpPNWQbG9WMyihZFs

Follow up email, inc. resources, sent out after each webinar

Q&A

SquaredUp