Security Dashboards, Metrics and Data Management Insights to see through the Maze

The Security Transformation Research Foundation

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Seeing through the Maze

• As digital estates become increasingly complex, attack surfaces are multiplied and most organisations face the same challenge:

• How do we make sense of the data we have to protect ourselves from cyber threats and drive real action around cyber security?
Dashboards are essential to communicate around security with senior stakeholders.

Their focus, format and content will vary depending on the degree of security literacy and the expectations of each audience, but they can only work as long as they are rooted in the management and governance culture of each firm.

Each approach will require a relevant narrative to be provided by Security leaders to the target audience supported by relevant data.

Dashboards

At least 5 different angles

EXECUTION = Progress against Roadmaps and Transformative Objectives
Audiences

3 broad groups of interests

- The audiences for each Dashboard will have diverse key interests – each requiring a specific narrative – but all are faced with a common problem: A constant deluge of management data

- For the Security message to be heard, each audience must be addressed in their own language and in clear and relevant terms

- There cannot be a single approach e.g. a metric on patch deployment (on its own) may be irrelevant to ARC members but useful to security management
1- Don’t over-simplify

Security cannot be reduced to a simplistic list of black and white “do’s and don’ts”: Use the dashboards to educate stakeholders where necessary.

2- Don’t window-dress

Avoid the “watermelon syndrome“ (green on the outside; red on the inside): Paint things as they are to build credibility and trust, and drive genuine risk treatment.

3- Tailor to each audience and focus on actionable outcomes

Use the power of the each audience to drive action where needed.
Metrics must underpin any dashboard. An **objective and quantitative** approach is essential to chart progress, but rarely sufficient in isolation: The **subjective and qualitative** elements – in particular around people, behaviours and awareness – cannot be missed.

Building meaningful metrics requires efficient and repeatable data collection and aggregation processes to be in place, on a scale sufficient to **accurately** address the expectation of each audience.

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**Metrics Attributes**

- **Relevance**
  - The Audience Understands the Narrative
- **Explicitness**
  - The Audience Can Drive Action
- **Simplicity**
- **Completeness**
Security Dashboards, Metrics and Data

Key Takeaways from our Focus Groups

Metrics

1- Don’t give too much away

Stay relevant and concise: Use the dashboards to build a dialogue with each audience

2- Security is not just about IT

Do not focus only on technology metrics: Engage with – and collect data from – all relevant stakeholders (HR, business units, etc...)

3- Prepare responses to the “so-whats”

Each audience may engage differently with the metrics: This will be underpinned by their own understanding of the context or cognitive biases
Data

• **Data Quality** underpins Metrics and their Accuracy

• The **Accuracy** of Metrics underpins the **Trust** in the dashboards and their **Value** for stakeholders

• But the complexity of real enterprises in today’s digital world undermines data **Completeness** (cloud, supply chain ecosystems, legacy systems etc…) and creates a considerable challenge for the reporting teams

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The Data Collection and Aggregation Challenge

- Escalating regulatory demands and increased management scrutiny
- Proliferation of underlying security sources (logs) and products
- Uneven deployment of security products across IT estates or geographies
- Diversity of data formats
- Access to third-party data across the supply chain and in the Cloud
- Combination of objective / quantitative and subjective / qualitative aspects
• Most Reporting Processes are still manual – at least in part – for many security teams

• This is error-prone, labour-intensive, repetitive and rarely motivating for security operators and analysts

• Beyond the costs involved and the immobilization of scarce security resources and skills which could be used on higher value-added tasks, it can develop into an attrition factor compounding the problem many CISOs have in staffing their teams
Data & Reporting

1- Focus on the efficiency of the collection and aggregation process, and automate as much as you can

Manual reporting processes may sometimes be unavoidable but are expensive, demotivating for the staff and error-prone.

2- Collect and process what you need, not what you can

Build on solid asset inventories and focus on metrics and dashboard objectives and the expectations of their audiences.

3- “Best-of-breed” is still a valid strategy around cyber security tooling but product proliferation must be managed

Declutter the Security estate and consolidate data on intermediary portals to make reporting analysts and security operators more efficient.
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