



ARCHITECTING NETWORK TELEMETRY

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JUNIPER
NETWORKS

Engineering
Simplicity

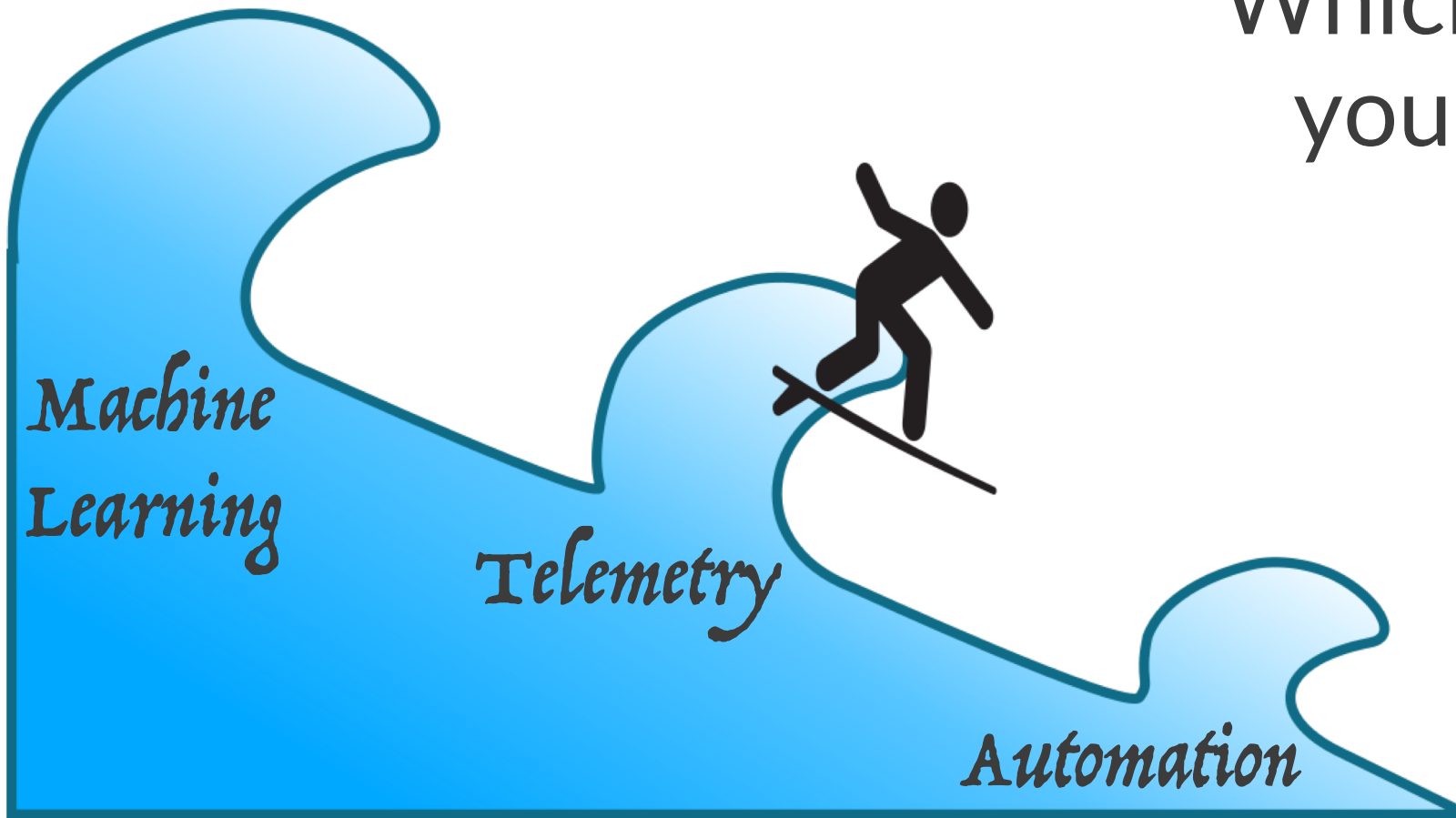
ARCHITECTING NETWORK TELEMETRY

Agenda

- Introduction
- Telemetry Recap
- Identifying Your Use Cases
- Important Checkpoint
- Essential Building Blocks of a Network Telemetry Architecture
- Challenges Deploying Network Telemetry
- Key takeaways

INTRODUCTION

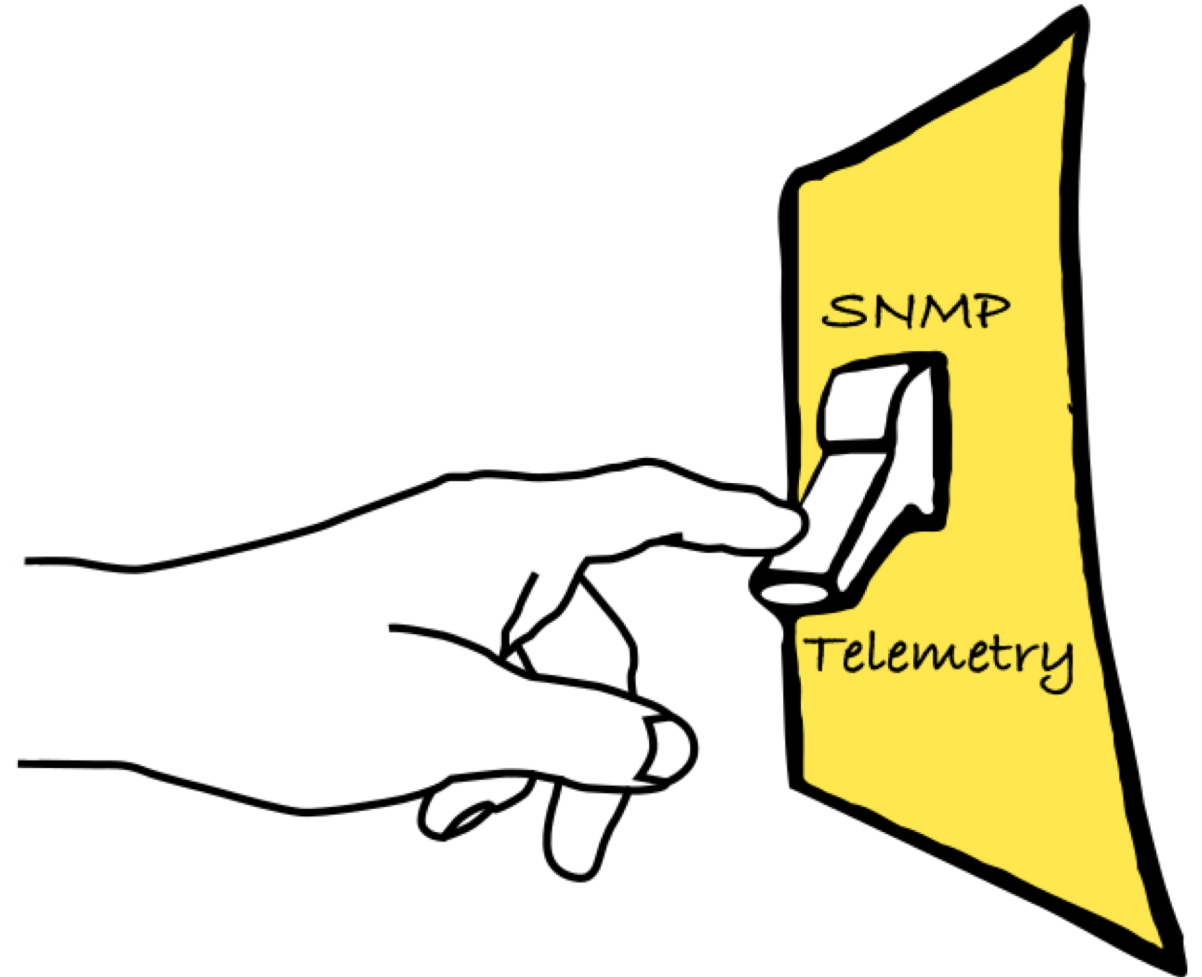
Which wave are
you surfing ?



FLICKING THE SWITCH

SNMP vs Telemetry

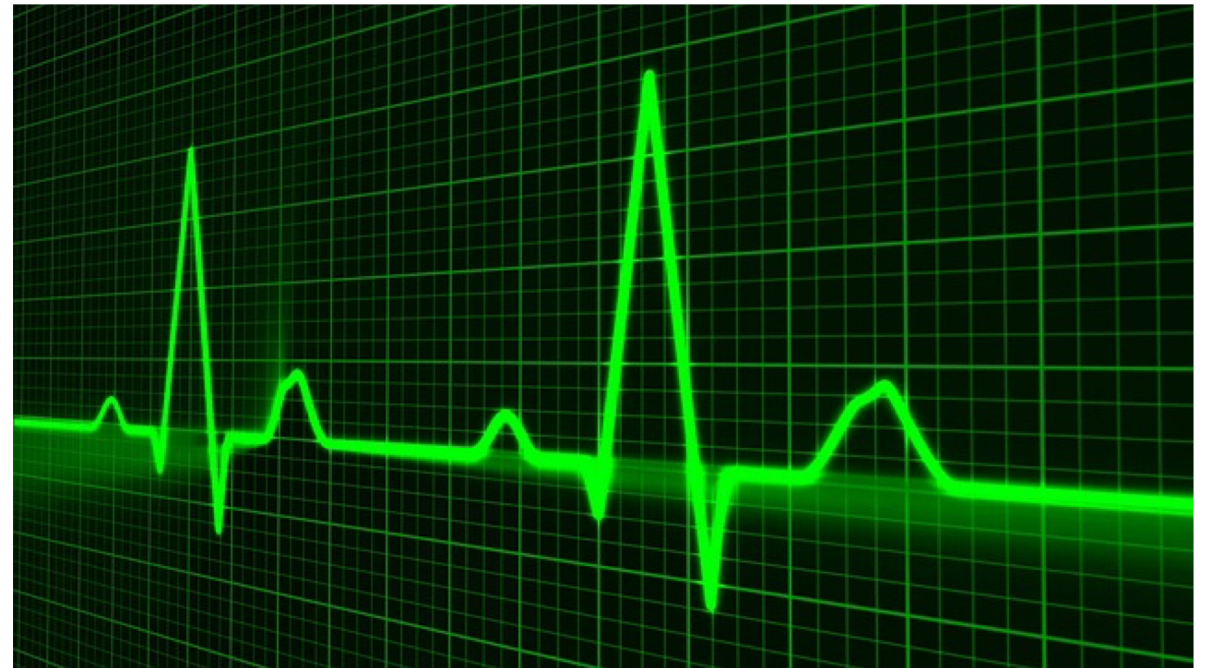
- Should we flick the switch ?
- Is that simple and achievable ?
- Is SNMP dead ?



TELEMETRY RECAP

Quick recap

- What it is
- How it works
- Why do we need it
- Real-time vs polling cycles
- When good enough is better than real-time
- Identifying your use cases

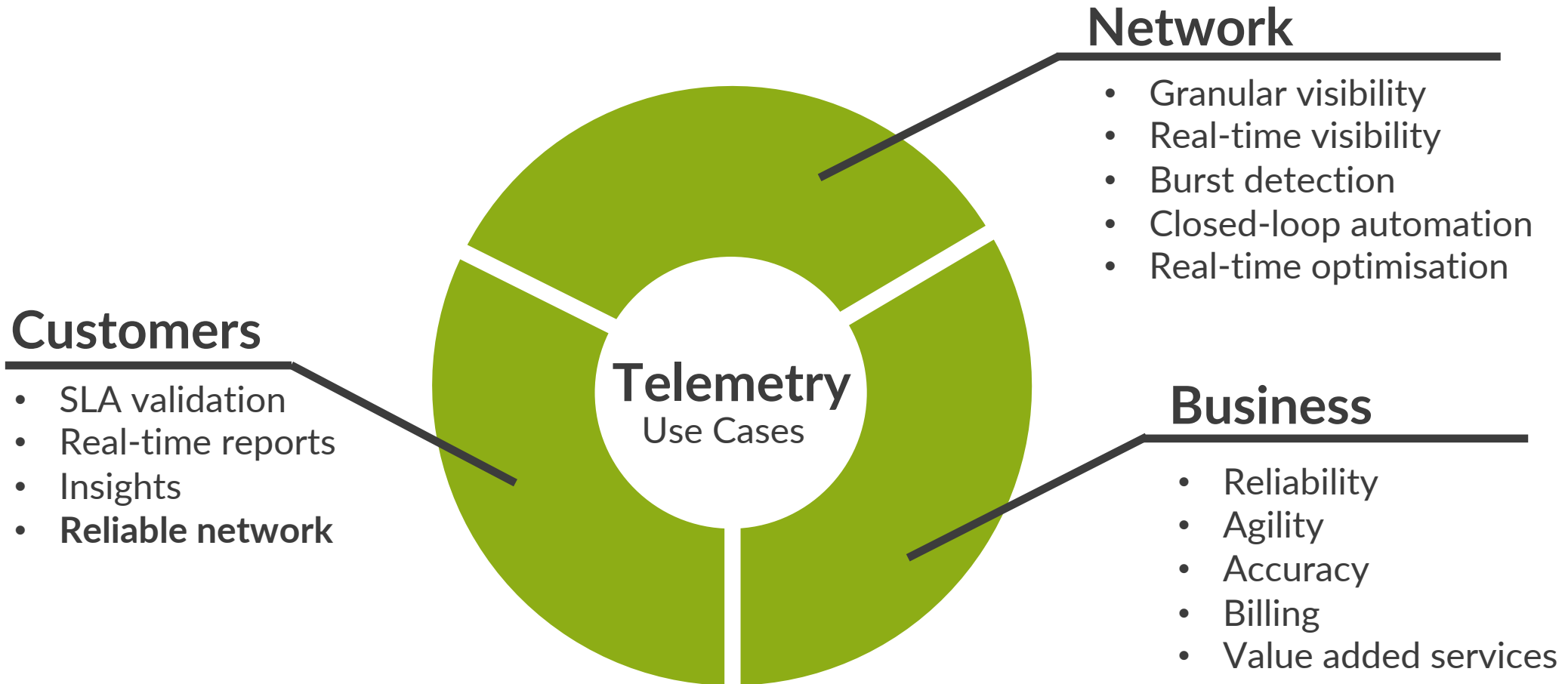


IDENTIFYING YOUR TELEMETRY USE CASES

Why do you need Telemetry ?

- Questions to help you identifying Telemetry use cases:
 - Current ? Sufficient ? Problems ?
 - [Real-time] Data driven network ?
 - Billing ?
 - Burst detection ?
 - Report\$?
 - Consumers ?
 - Tomorrow ?

TELEMETRY USE CASES



IMPORTANT CHECKPOINT



- ✓ You understand why you need telemetry
- ✓ You have identified your telemetry use case(s)
 - Requirements that will drive your telemetry architecture
 - And one important advice

IDENTIFYING ARCHITECTURAL REQUIREMENTS

Requirements that will drive your telemetry architecture



IMPORTANT ADVICE

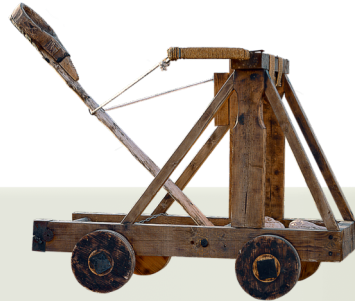
If your goal is to move a rock from A to B

Minimum viable way



VS

Good enough



VS

Over-engineered



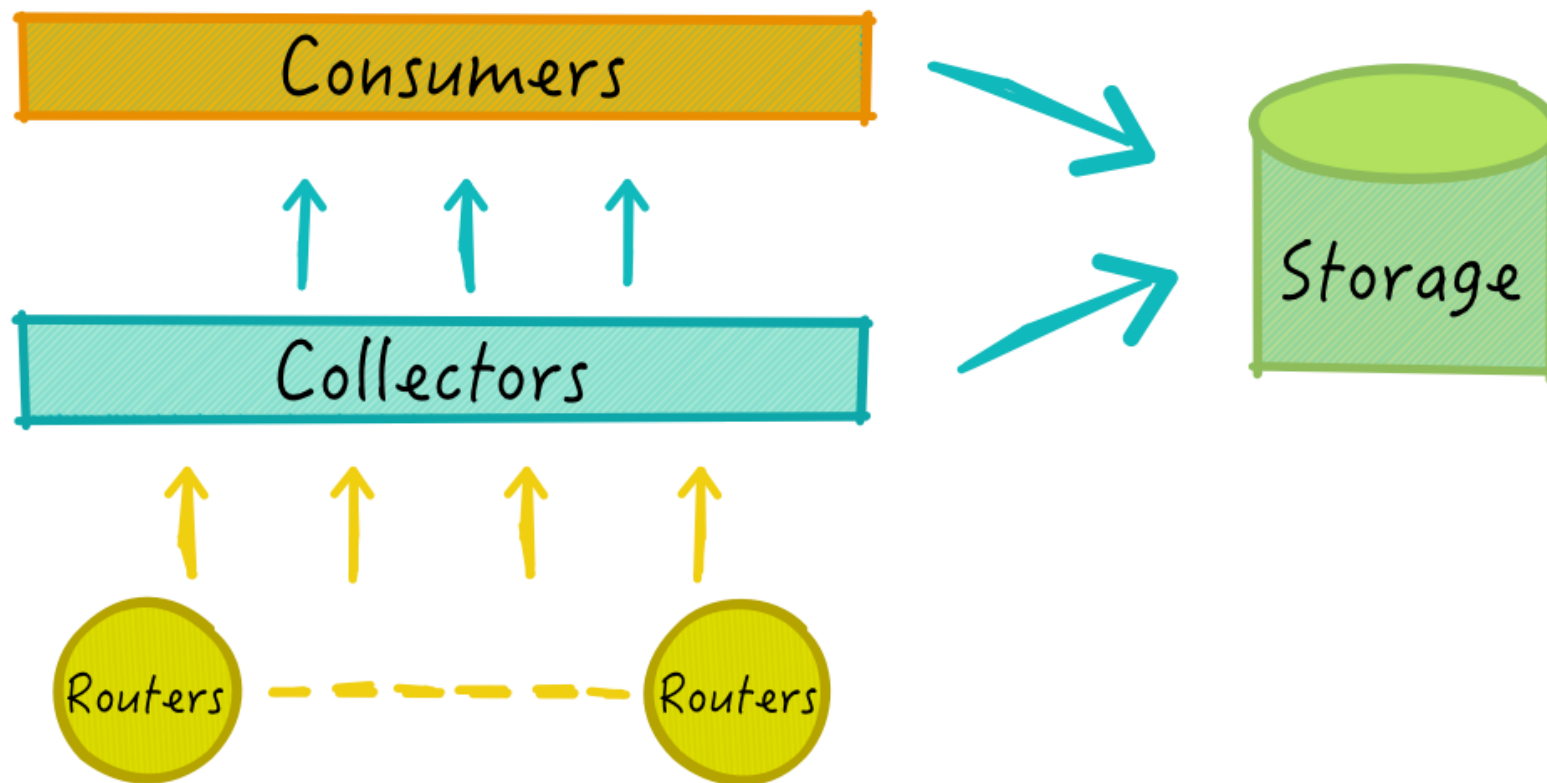
- Do not over-engineering
- Simplify the architecture

- Good enough is better than today
- Time to market



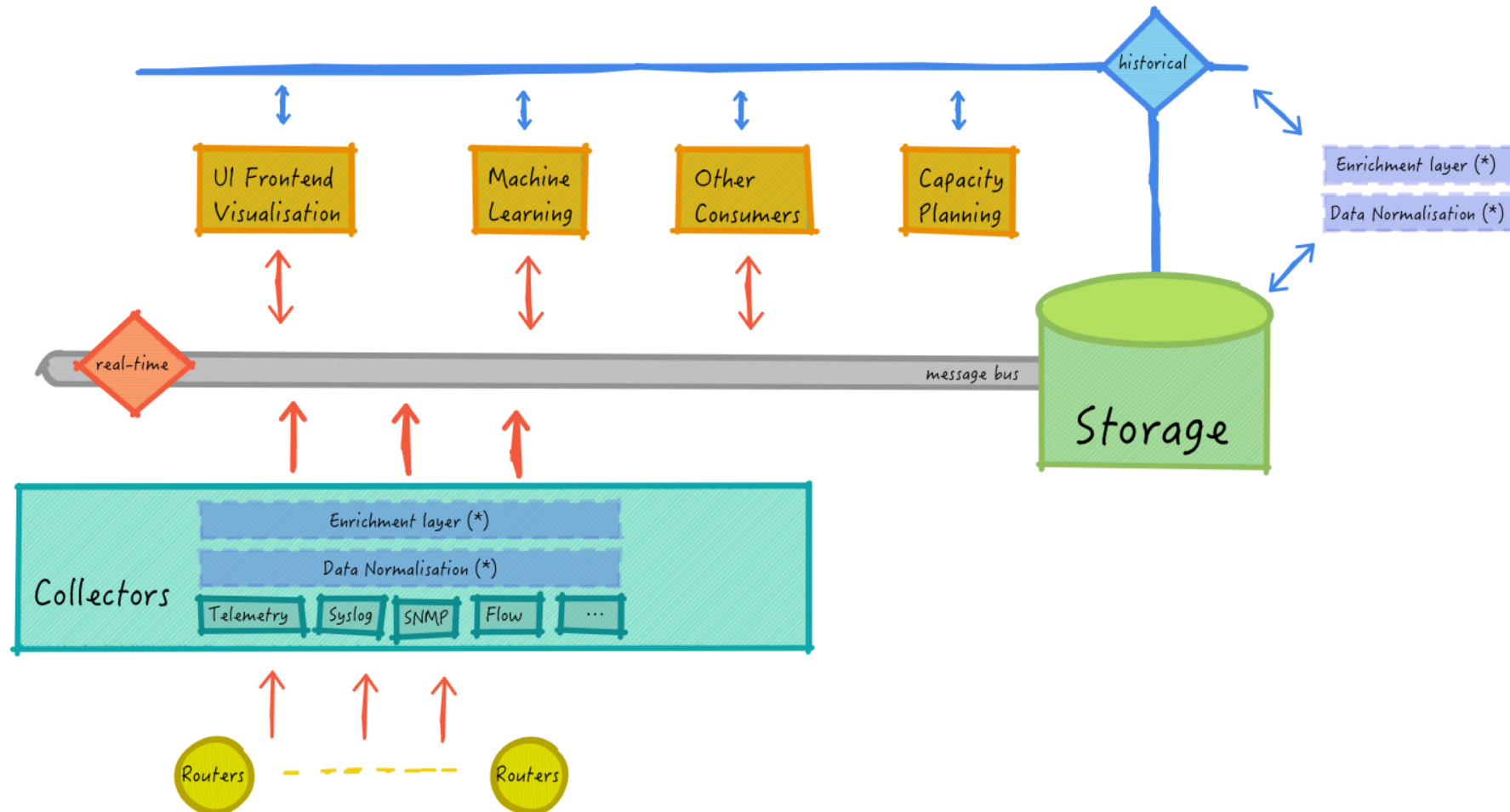
TELEMETRY BUILDING BLOCKS

Essential building blocks of telemetry




TELEMETRY BUILDING BLOCKS

A more comprehensive architecture



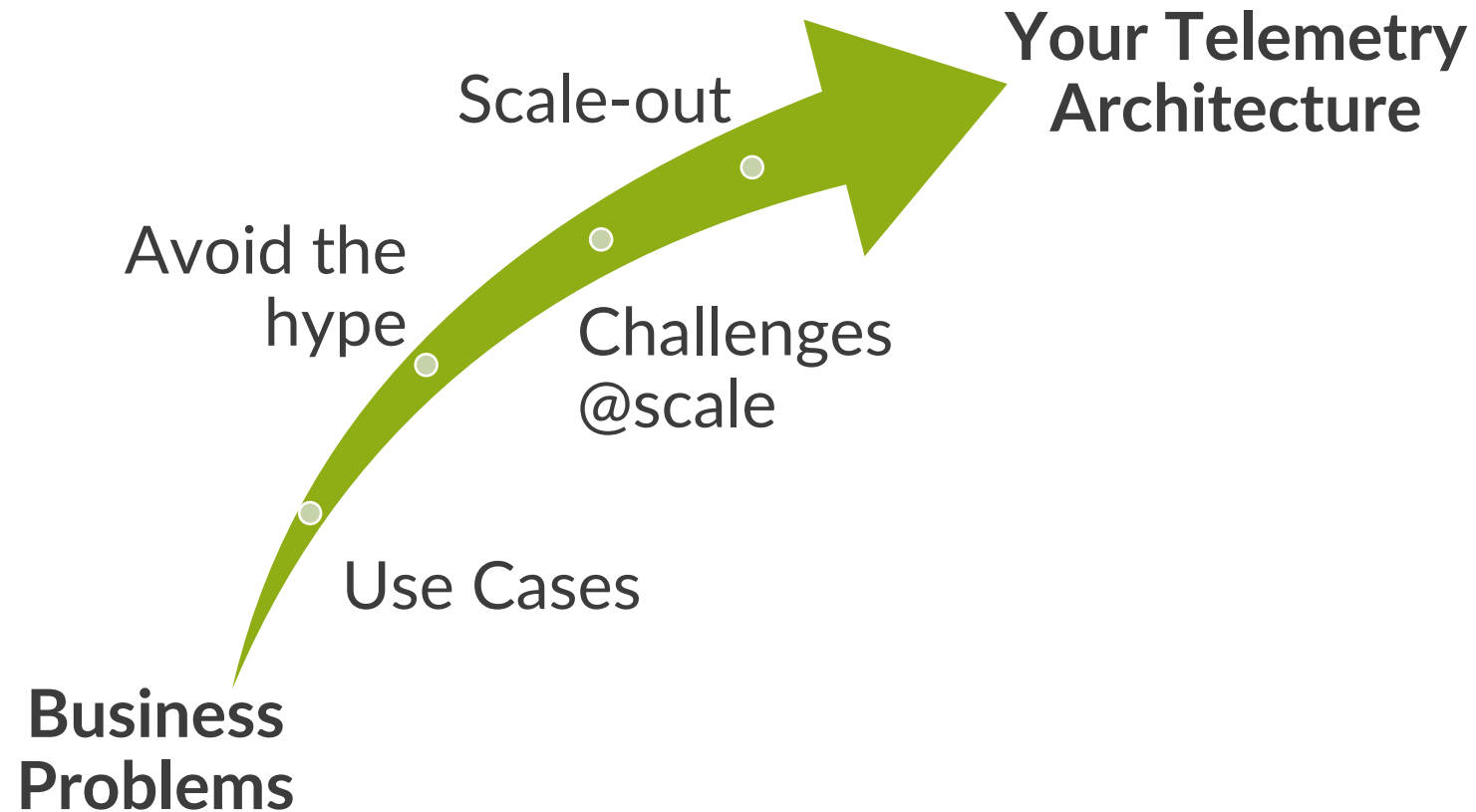
CHALLENGES DEPLOYING NETWORK TELEMETRY

- 
- A silhouette of a person pushing a large sphere up a hill, symbolizing the challenges of deploying network telemetry.
- ❖ Real-time operations at scale
 - ❖ Data retention
 - ❖ Orchestration
 - ❖ Bottlenecks
 - ❖ Context
 - ❖ Collect once. Store once.

FINAL CONSIDERATIONS

- Address your problems (customers, business, network)
- Address them at any scale
- Design for failure
- Remove SNMP if it has no use for you
- More importantly
- Are the benefits sufficient compared to the efforts ?

KEY TAKEAWAYS



KEY TAKEAWAYS

And always
remember ...

KEY TAKEAWAYS

Good enough

is better than

perfect

THANKS