

Michelangelo: a tool for forecasting benefits and performance

Safety Forum in a Flight Safety Foundation conference in partnership with EUROCONTROL and ERA.

June 2022

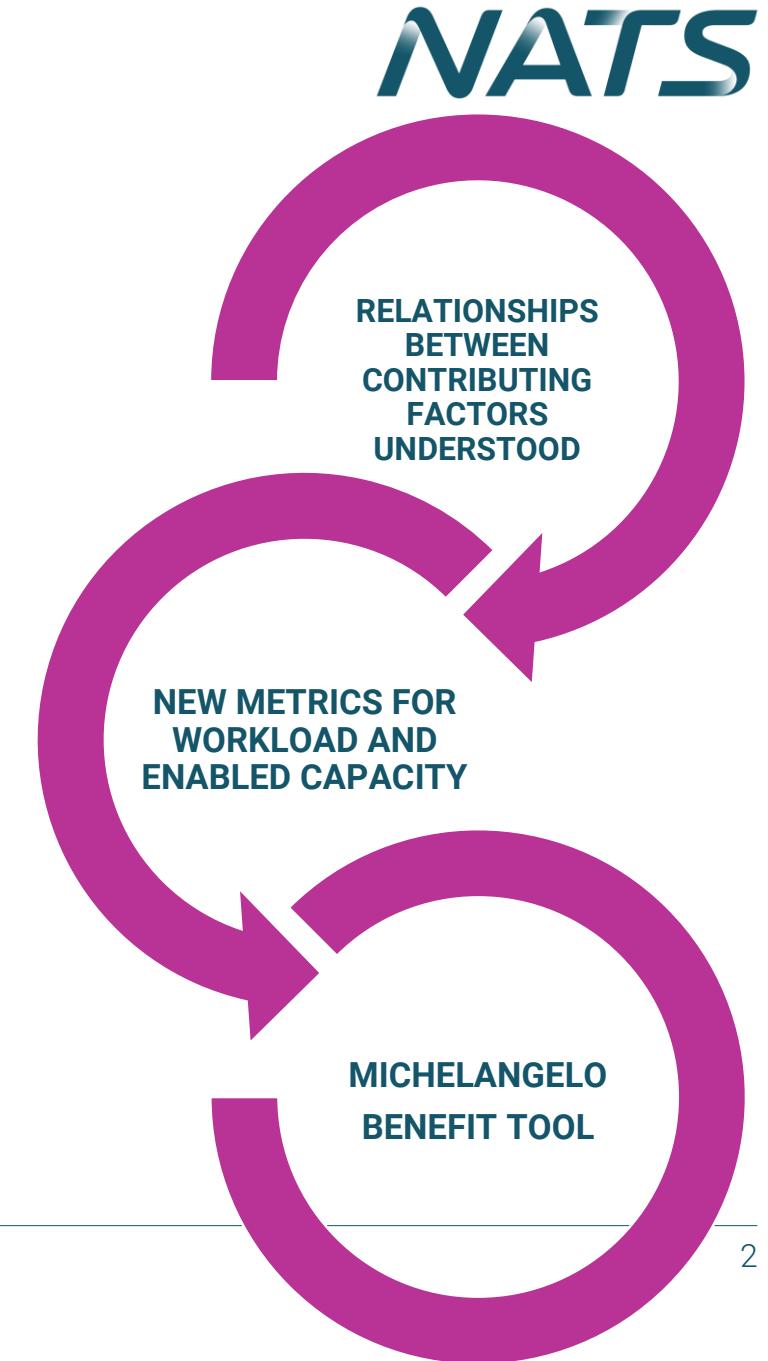
The NATS logo is located in the bottom right corner. It consists of the word "NATS" in a bold, white, sans-serif font. The letters are slightly slanted to the right, and there is a subtle shadow or glow effect behind them, giving them a metallic appearance.

Problem

NATS conducted a review of current benefit types and measures.

A need was identified to better understand the relationship between inputs and realised benefits/operational performance.

Analytics was tasked with developing a tool for forecasting benefits and performance.



Goals

Understand the **relationships** between contributing factors and workload, enabled capacity and ops performance

Data-driven

Understand how **programme-driven workload improvements** can be used to target C2 delay or 3Di/RAT

Set top-down **operational targets** based on understanding of workload and enabled capacity

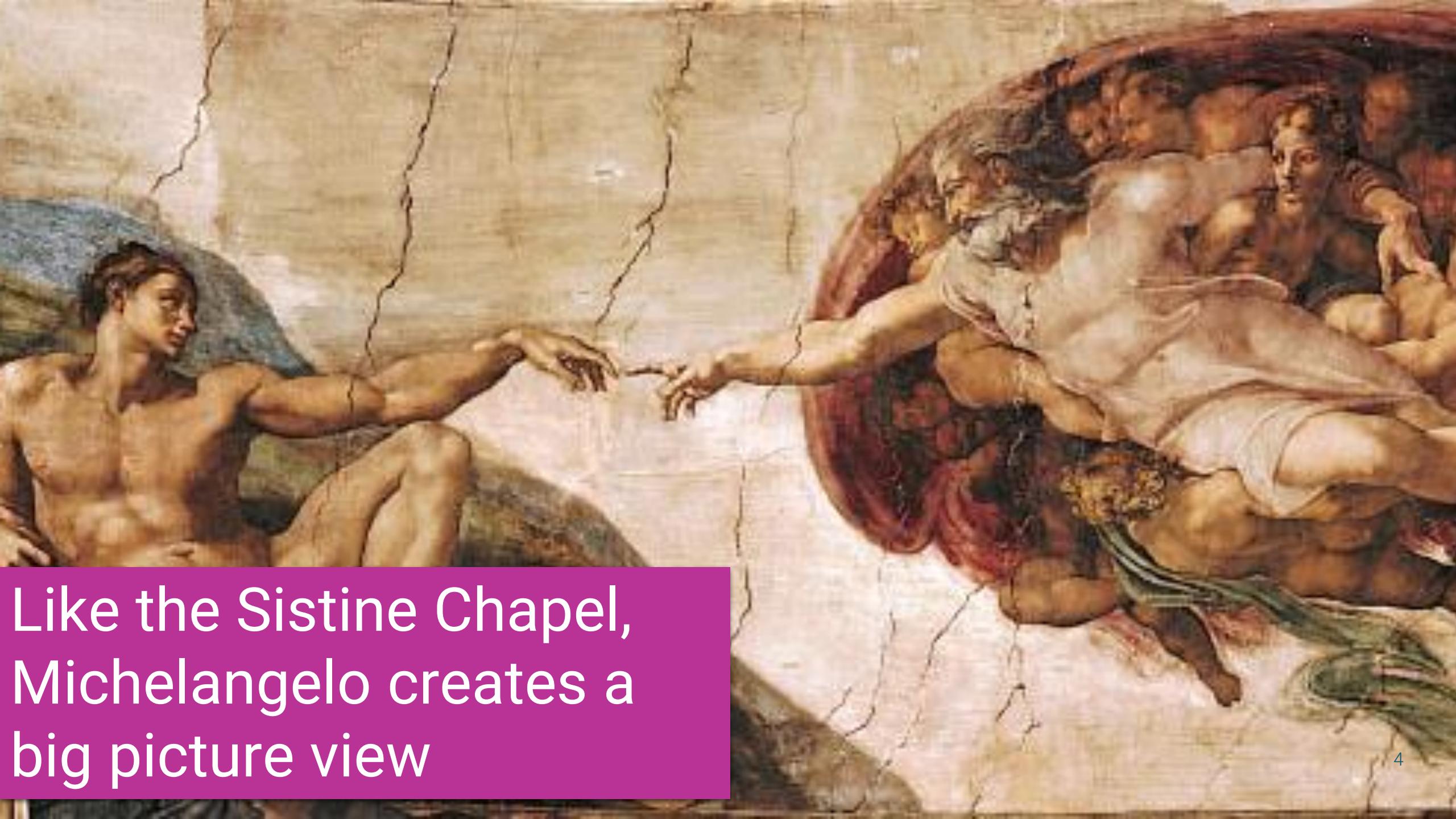
Smart operations

Apportion top-down quantitative benefit targets vs forecast bottom-up from programmes

Target our investments more robustly towards **desired RP3 operational outcomes**

Business performance

Inform a **benefit-led design** of programmes



Like the Sistine Chapel,
Michelangelo creates a
big picture view

Collaborative development and outcomes

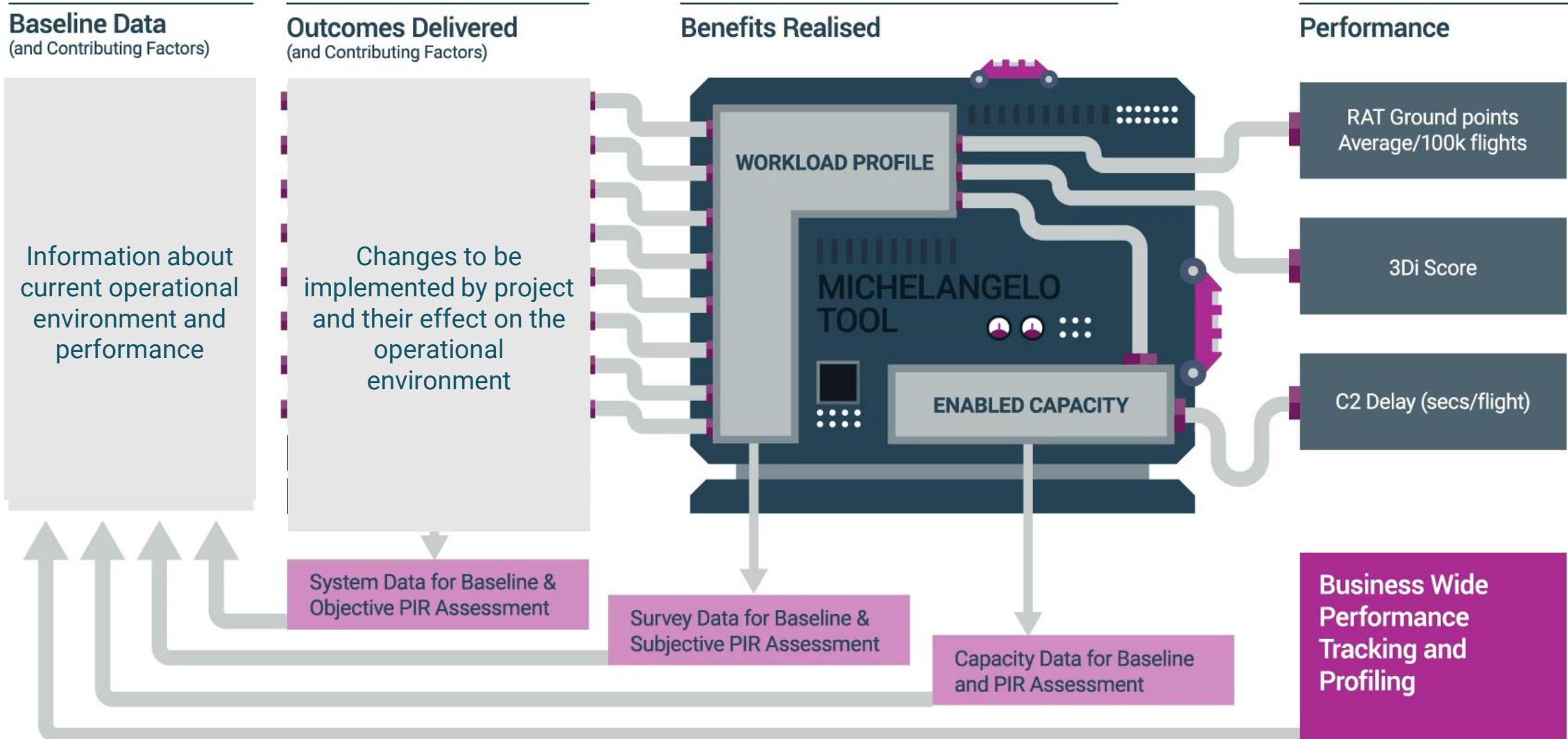


Outcomes:

- Developed new systems-based metric for workload, which predicts controller responses to the Human Performance workload/situational awareness surveys based on objective factors observed during the session worked
- Developed metric for enabled capacity based on workload and sector characteristics
- Developed predictive models for 3Di, C2 delay, and RAT points, each incorporating the workload metric

Benefits & Operational Performance

NATS



- New routes more environmentally friendly, what is the knock on affect.



- Identify hotspots for poor environmental performance and determining how to resolve including finding contributing factors.



A new way to measure benefits including sustainability via workload and enabled capacity

Enables setting top-down operational targets

Allows better investment decisions

**Data-driven,
smart
operations &
improved
business
performance**

Thank you

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