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Crisis – What Crisis?

The potential for MSaaS techniques and tools to support Crisis Management Exercises

Ben Doyle / Keith Ford



Introduction

Modelling & Simulation as a Service

Reuse of Resources

Reuse of Simulations

Resources

Rapid Composition of Simulations

Composition of Simulations

- MSaaS is a work in progress
- The scope and terminology is still evolving

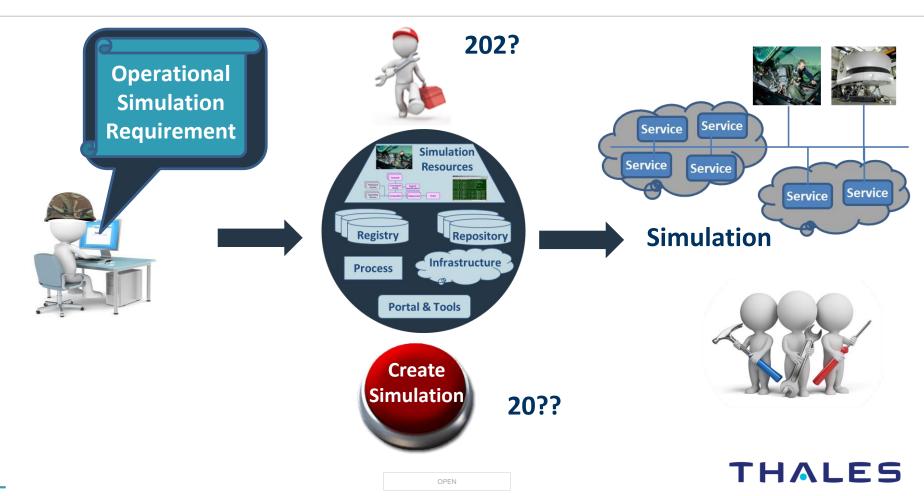


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MSaaS Ecosystem

Ecosystem Resource **Simulation Administrator Provider** Resources Registry Repository Infrastructure **Process Simulation Simulation Developer** User **Portal & Tools** THALES

MSaaS Vision



MSaaS development is being driven by Military needs

- > Training
- > Mission Rehearsal
- ➤ Concept Development & Experimentation

Key benefits

- > Agility deliver whenever/wherever needed + adapt to changing needs
- ➤ Re-use resources
- Reduce technical skills required to deploy simulation environments
- ➤ Enable multiple simultaneous simulations + efficient resource use
- Cost reduction
- > New business models



How can MSaaS techniques and tools benefit Crisis Management Training?

Crisis: An unplanned event or occurrence that leads to confusion / inaction and the consequences give rise to the requirement for CM

Your crisis is my normality

A crisis is only a crisis until it is resolved





Crisis Management Activities

Predict - What and when Plan Formulate a response Recognise **Prepare** What has happened Obtain necessary resources Crisis Train and exercise Respond Implement the **Prevent** appropriate response - If possible stop the crisis from happening Recover Return things to normal after the crisis Record Capture what happened and what was done Feed this into future prediction, planning and

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Application of technologies

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Information **Decision** and Secure resilient **Resilient comms** processing and re-planning comms network analysis tools Information Information Resource sources: sensors visualisation location + people **Situation** Plan **Implementation Awareness** Information management **Route Planning Decision** and List of Required **Appropriate** planning tools Resources Plan Resource Allocation / Simulation tools **Tasking** Incident **THALES**

Training Exercises (UK approach)

- ➤ Discussion based exercise what if.. ? discussion and reflection
- ➤ Table-top exercise simulated incident with scripted injects/events
- Live exercise immersive simulation

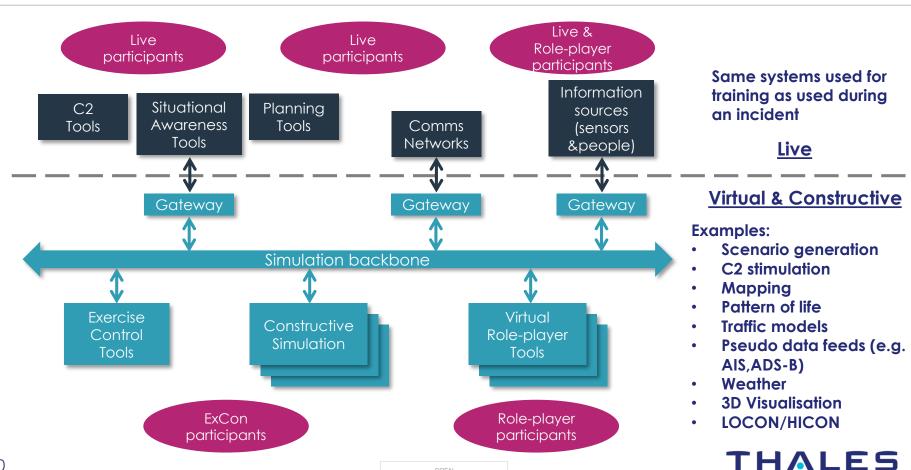
Live Exercises

- ➤ Multi-agency → Collective Training
- ➤ Live / Virtual / Constructive mix
- **Examples:**
- ❖ VIKING 18 organised by the Swedish Armed Forces
- Exercise Unified Response organised by the London Fire Brigade

Complex, long lead times, large numbers of participants and assets



Exercise Architecture - Generic Sketch



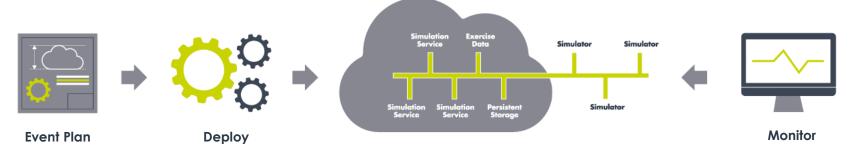
Application of MSaaS - tooling



Data model driven asset management and composition



Enables automated deployment of networked simulation environments





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Expected MSaaS Benefits to Crisis Management Exercises

- Efficient use of simulation resources (assets) buy/develop once, use many times
- Reduce technical expertise required for creating/deploying simulations by capturing and reusing simulation designs (asset plans)
- Save time creating and deploying simulations through reuse and automated deployment
- Capitalises on the benefits of recent IT/cloud developments agile allocation and use of computing resources
- Collaborative working by providing a shared (and controlled) development environment;
- Potential for different business models (e.g. Pay As You Go) but don't underestimate the work needed to introduce new models



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Ben Doyle (ben.doyle@uk.thalesgroup.com) Keith Ford (keith.ford@uk.thalesgroup.com)

