UAV-DB
Proof of Concept

IST659 – Database Administration Concepts and Database Management

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AGENDA

- Introduction
- Project Synopsis
- ER Model
- Relationships
- High Level System Tiers
- Project Deliverables

SPATIAL
SYMMETRY

INTRODUCTION

- **Spatial Symmetry** is an organization in UK that specializes in spatial analytics and drone operations.

- Established in 2016, their main operations are aerial data acquisition, mapping, decision support system development and environmental monitoring.

- Spatial Symmetry is licensed to conduct drone surveys with the UK National Civil Aviation Authority.

- UK regulation suggests that all drone assets and their flights must be logged, while safety checks performed pre-flight and post-flight.
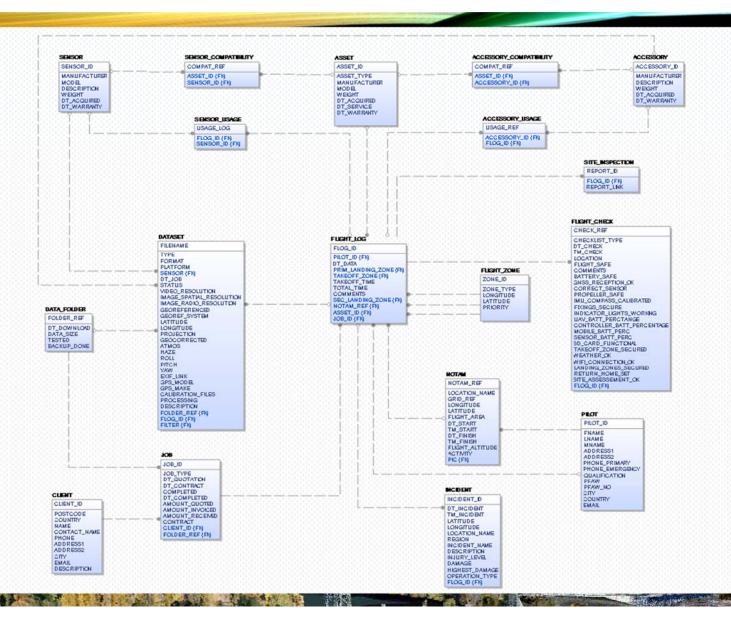
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PROJECT SYNOPSIS

- **UAV-DB** is a comprehensive database that ensure that Spatial Symmetry always have the appropriate data logged for regulatory purposes.

- The designed and normalized database ensures that all asset information is kept up to date, including their maintenance records.

- The database logs every flight operation conducted within the organization, complying to the Air Navigation Order (ANO) 2016.

- The database stores information on all contracts issued and clients involved.

- All data captured are stored in the database complying to the European INSPIRE Spatial Data Infrastructure (SDI) standard.

- All data can we queried to ensure productive information retrieval for efficient decision making.
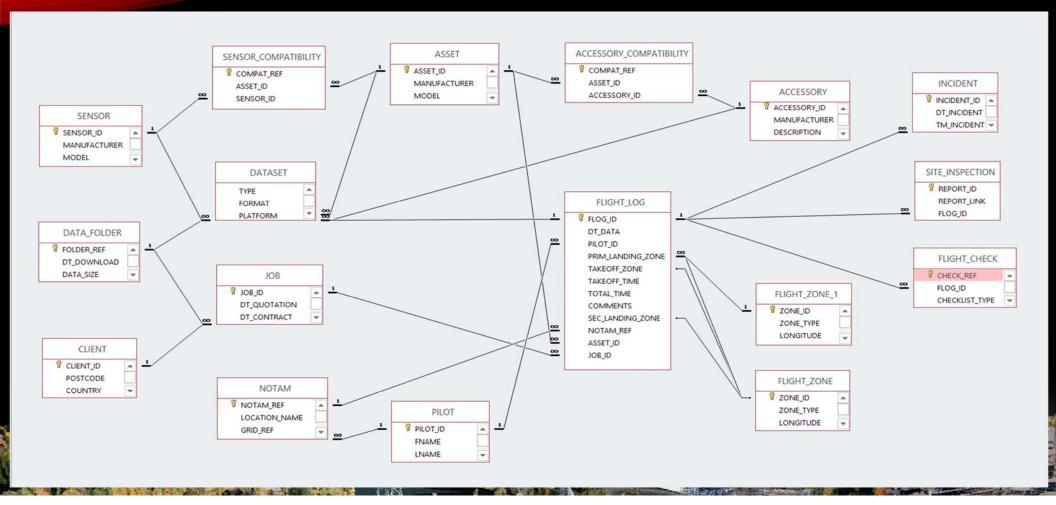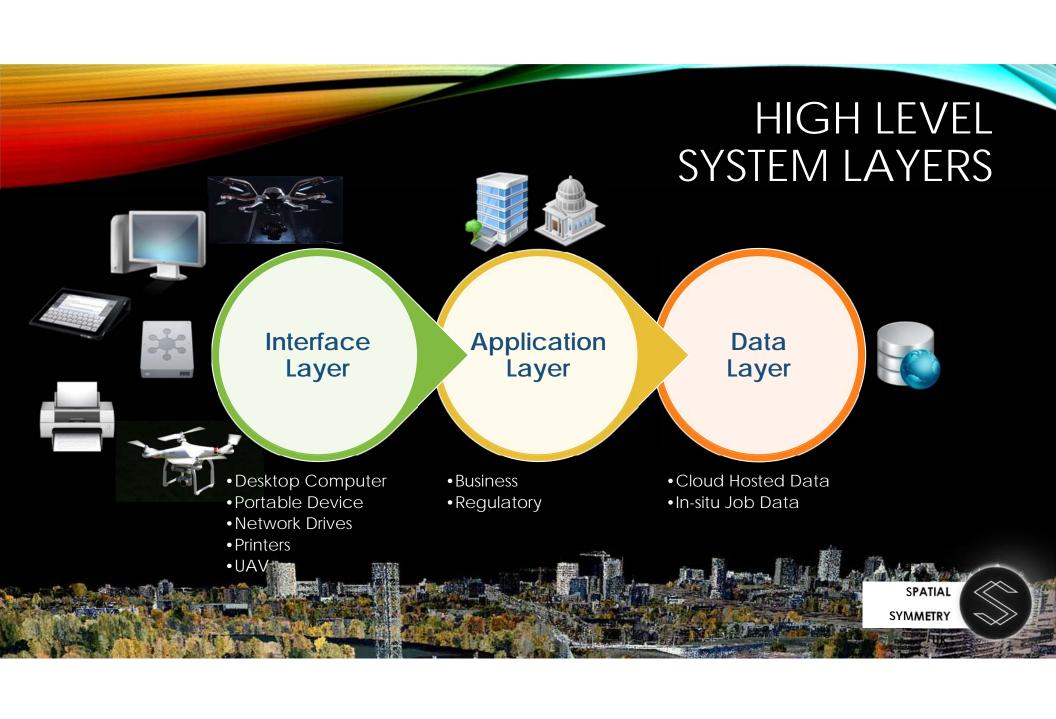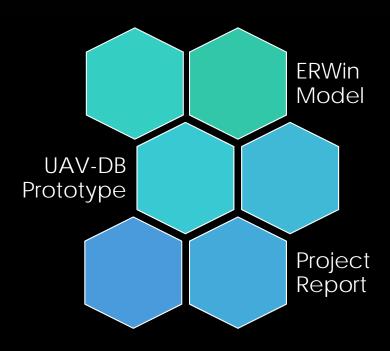
SPATIAL
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MODEL

GUI

HIGH LEVEL SYSTEM LAYERS

Interface Layer

- Desktop Computer
- Portable Device
- Network Drives
- Printers
- UAV

Application Layer

- Business
- Regulatory

Data Layer

- Cloud Hosted Data
- In-situ Job Data

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CONCLUSION

- UAV-DB is based on a real scenario and will be used by Spatial Symmetry to maintain their drone operations.

- UAV-DB Schema design specification are based on interviews with real drone pilots.

- Lessons Learnt:
  - Incompatibility issues connecting MS Access DB with MS SQLServer.
  - Issues with portability from MS Access and MS SQLServer and vice versa, even thought they are both Microsoft Products.
  - Incompatibility of ERWin schema with Access; however, no issues with ERWin and SQLServer.
  - SQL within Access slightly different from SQL Server, causing issues.

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