Sierra Space's IT environment contains a wide blend of inherited / migrated solutions from our former parent company (SNC), commercial off-the-shelf solutions (COTS) as well as solutions that have been architected from scratch in-house to serve specific needs. Database technology at Sierra Space supports virtually all these needs in some form or fashion.

Due to the widely varying scope of the solutions within IT, the large scale / distributed nature of the environment in general, and the fluid nature of all database related technology, a very particular combination of technical skills, subject matter expertise, business savvy, and attention-to-detail is required to effectively manage the database layer.

Executive Summary: To integrate / elevate Sierra Space Database Solutions group into Enterprise Operations Organization through continued demonstration of subject matter expertise, diligent work ethic, attention to detail, and exceptional communication skills.

Ongoing Strategic Initiatives:

- Build-out of Database Solutions function
- Apply short to medium-term standards and solutions to enable medium to long-term rapid expansion.
- Set reasonable, clear, and realistic expectations for database technologies and broad-scoped capabilities.

"Go slow in order to go fast."

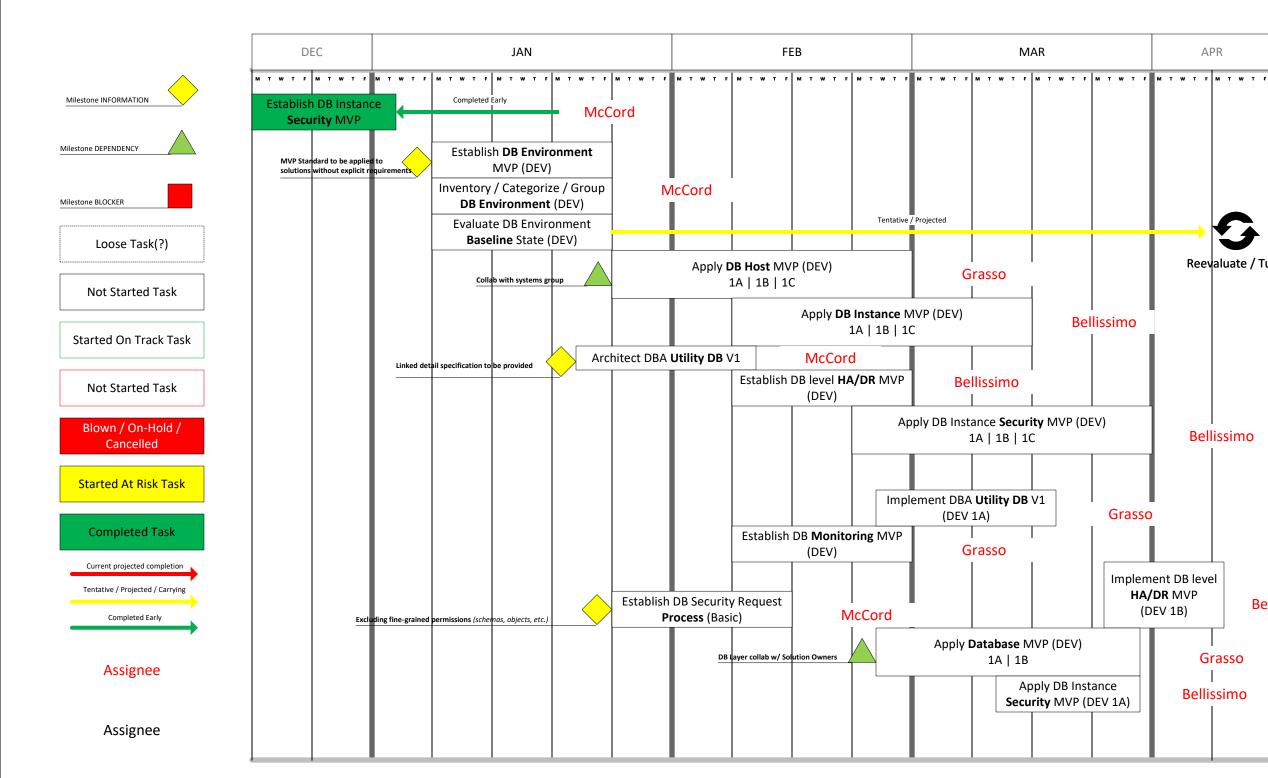
Ongoing Tactical Initiatives:

- Hypersupport / Rapid Response
- Develop Service Catalog
- Collapse sprawl
- Evaluate feasibility of PaaS (Azure) migrations

Non-Technical Goals:

- Increase visibility through communication / expectations. (Clear, Complete, Correct, Concise, Courteous)
- Continue to offer white-glove support to customers, peers, colleagues, and stakeholders.
- Adopt and promote a methodical technical approach whenever possible, with a bias toward uncompromised quality of work, expectation setting, and attention to detail.

"Measure twice, cut once." "Correct is better than fast. (Be both.)"



MAR

Bellissimo

Grasso

Implement DB level

HA/DR MVP

(DEV 1B)

Grasso

Bellissimo

Grasso

1A | 1B

Apply DB Instance

Security MVP (DEV 1A)

1A | 1B | 1C

APR

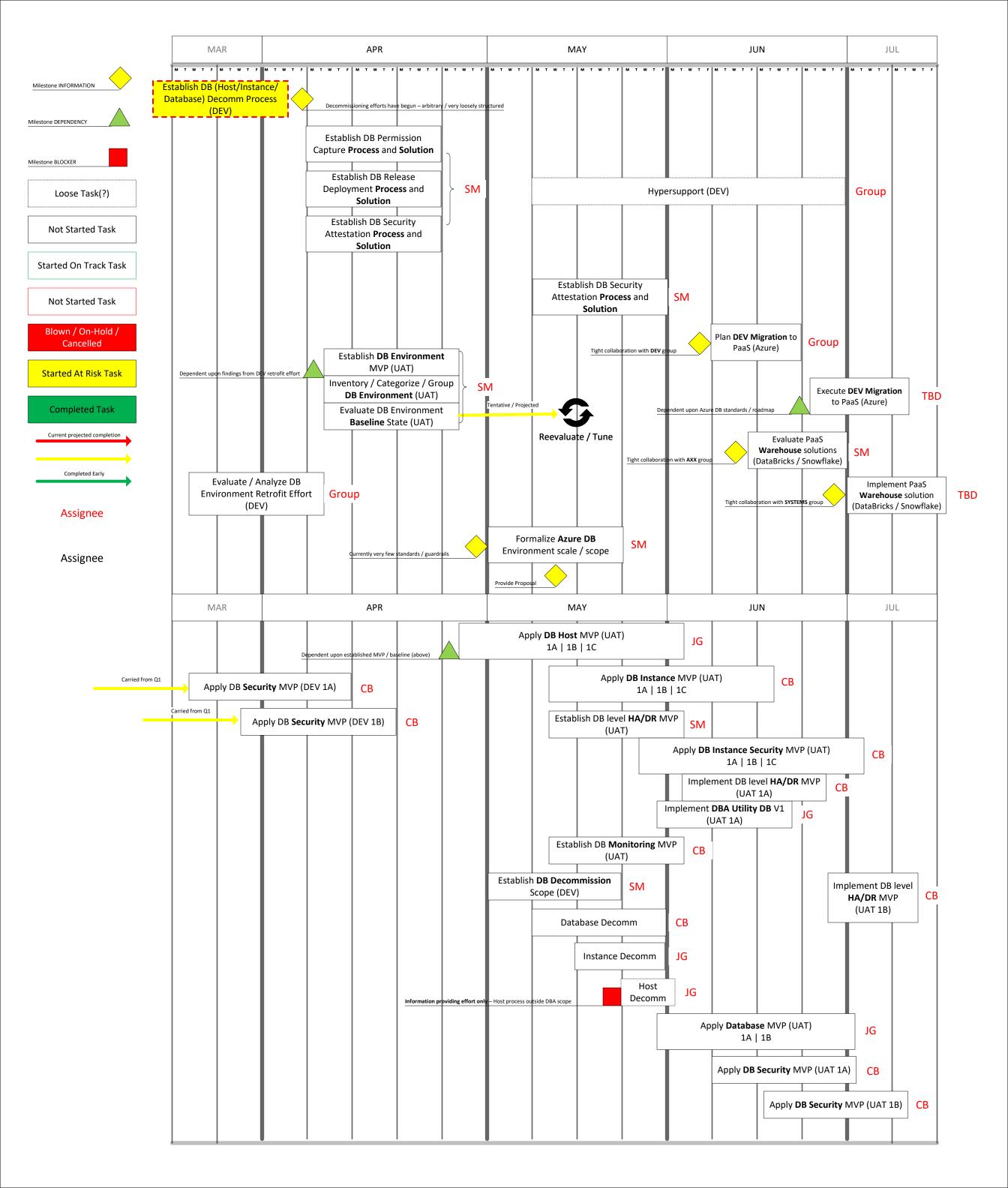
Reevaluate / Tune

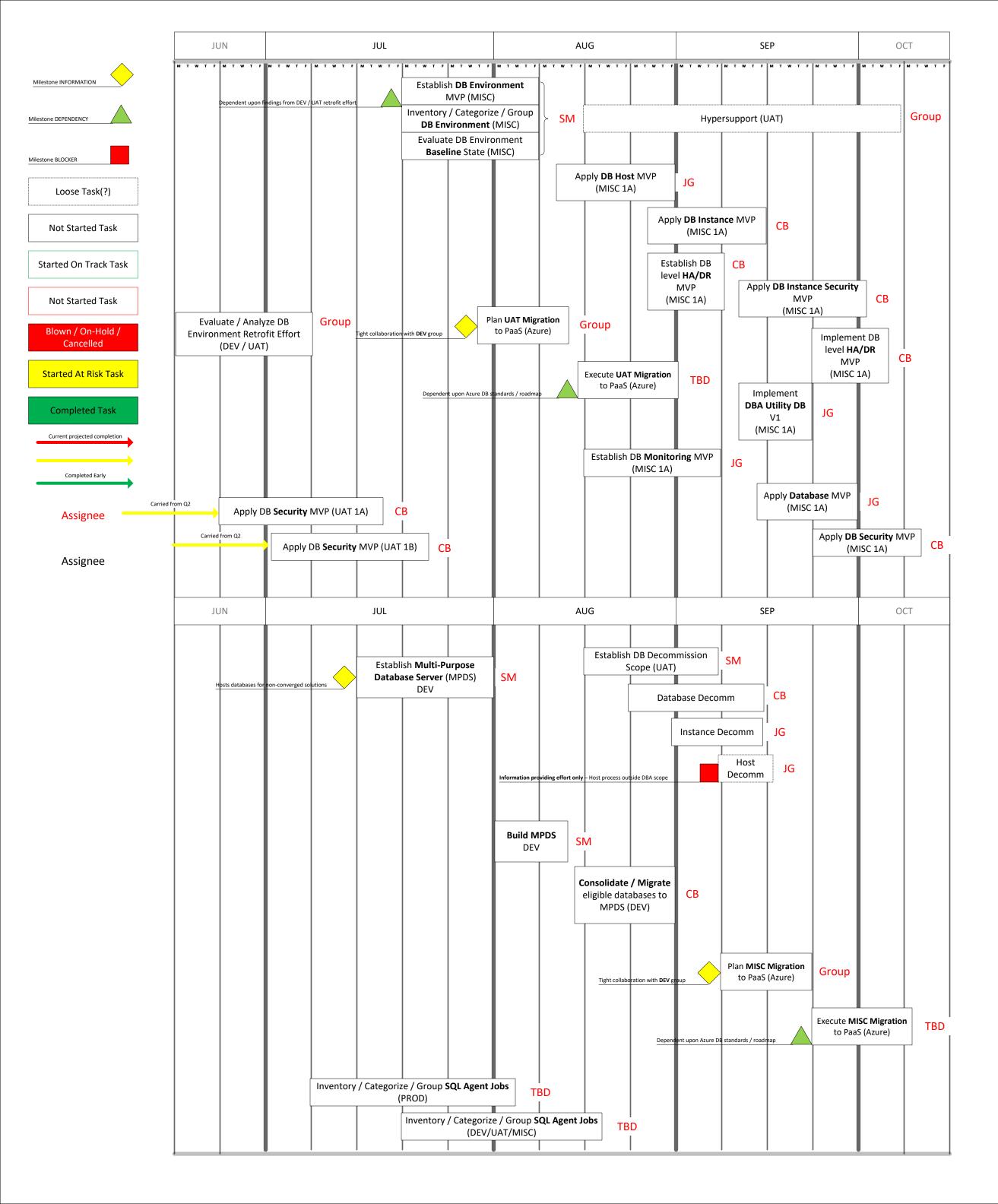
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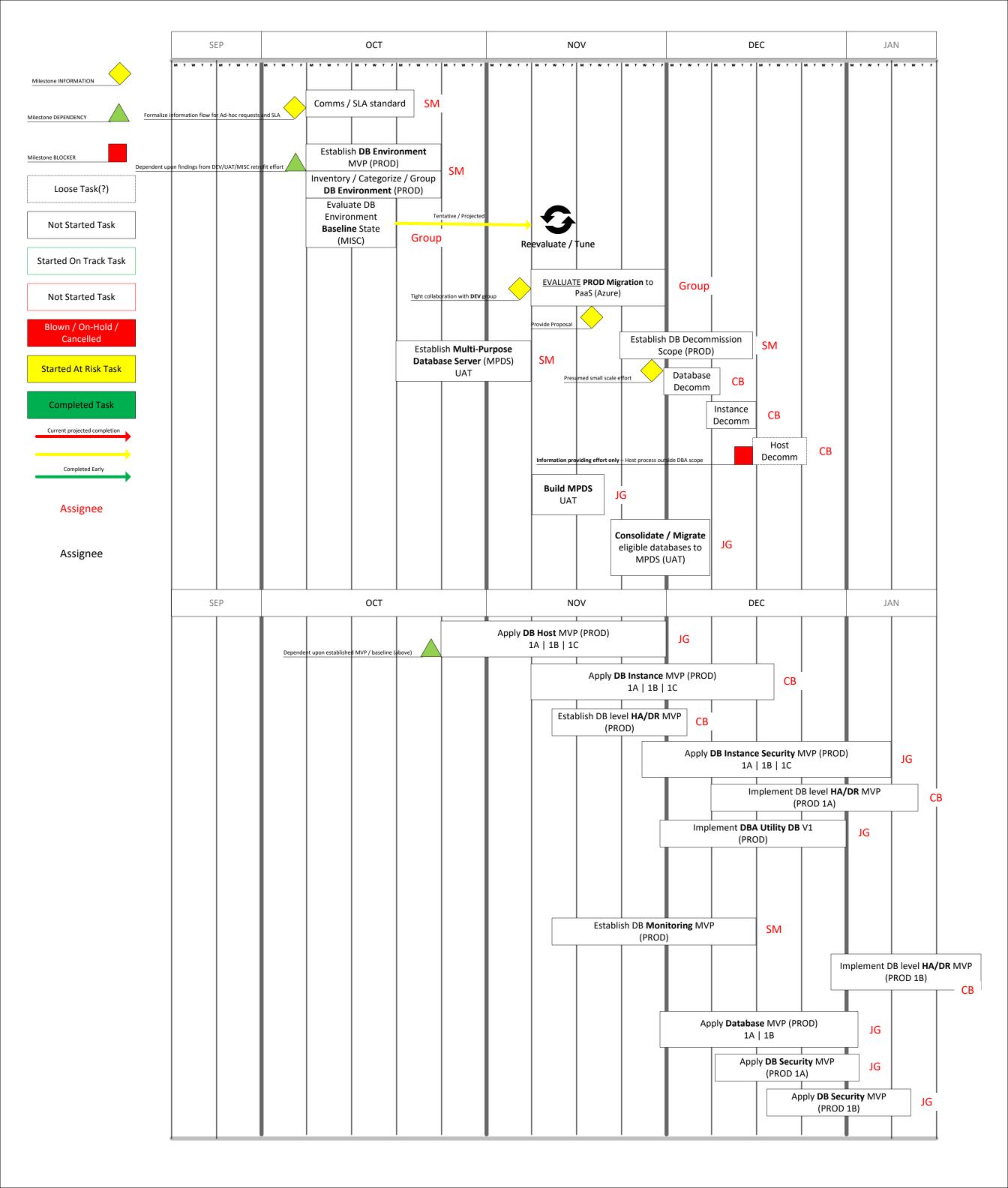
Grasso

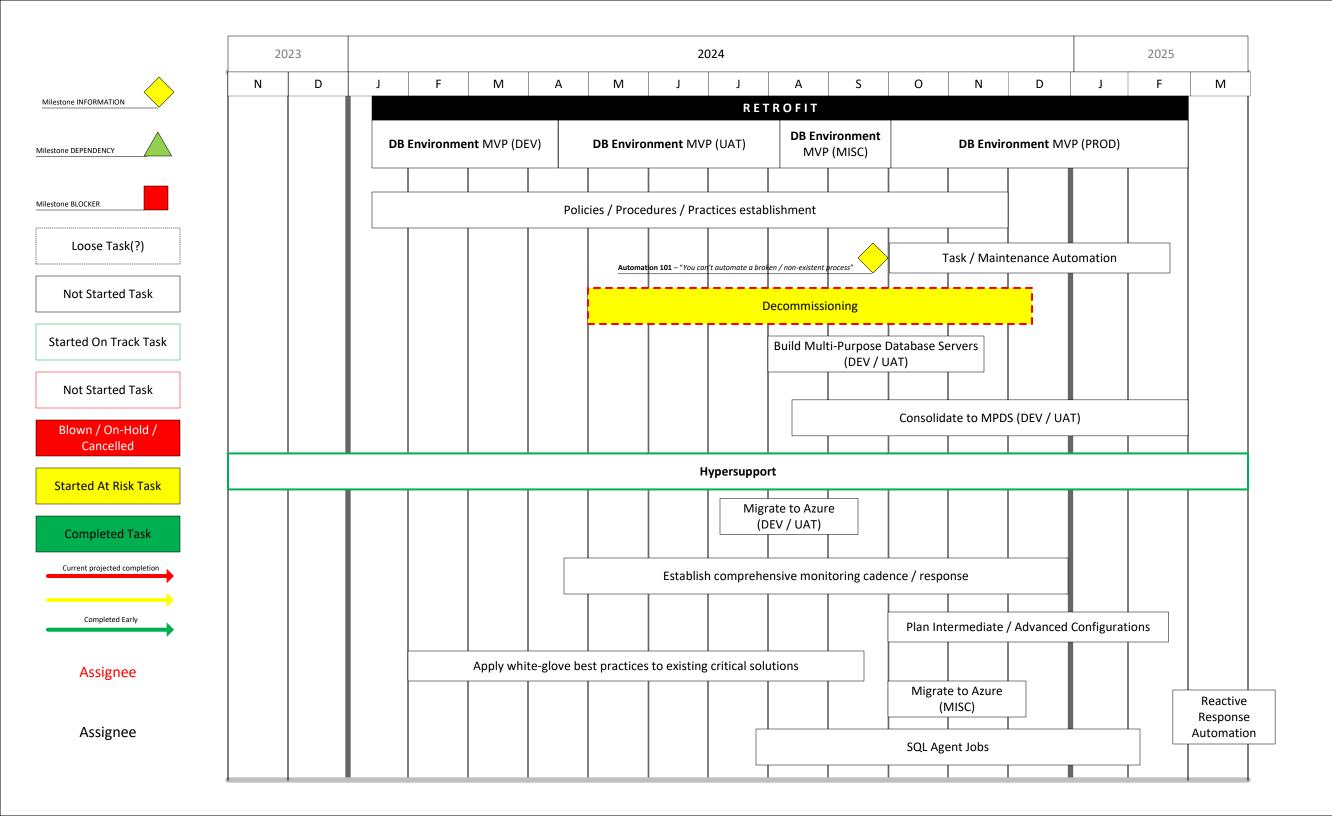
Bellissimo

Bellissimo









Intra-group disciplines and responsibilities at SierraSpace

Administration Using available techniques, administer environment on behalf of stakeholders

Using available techniques, respond to, support and resolve incidents encountered by stakeholders / users

Create solutions to optimize ease-of-use for customers, and ease administration and support burdens for DBA / DBS staff

Comprehensive planning, strategy, optimization and design

Comprehensive administration of Database layer security facets in support of stakeholders and business requirements

Using system performance counters, historical metrics and extrapolative measurement to inform future architectural decisions

Analysis

OR

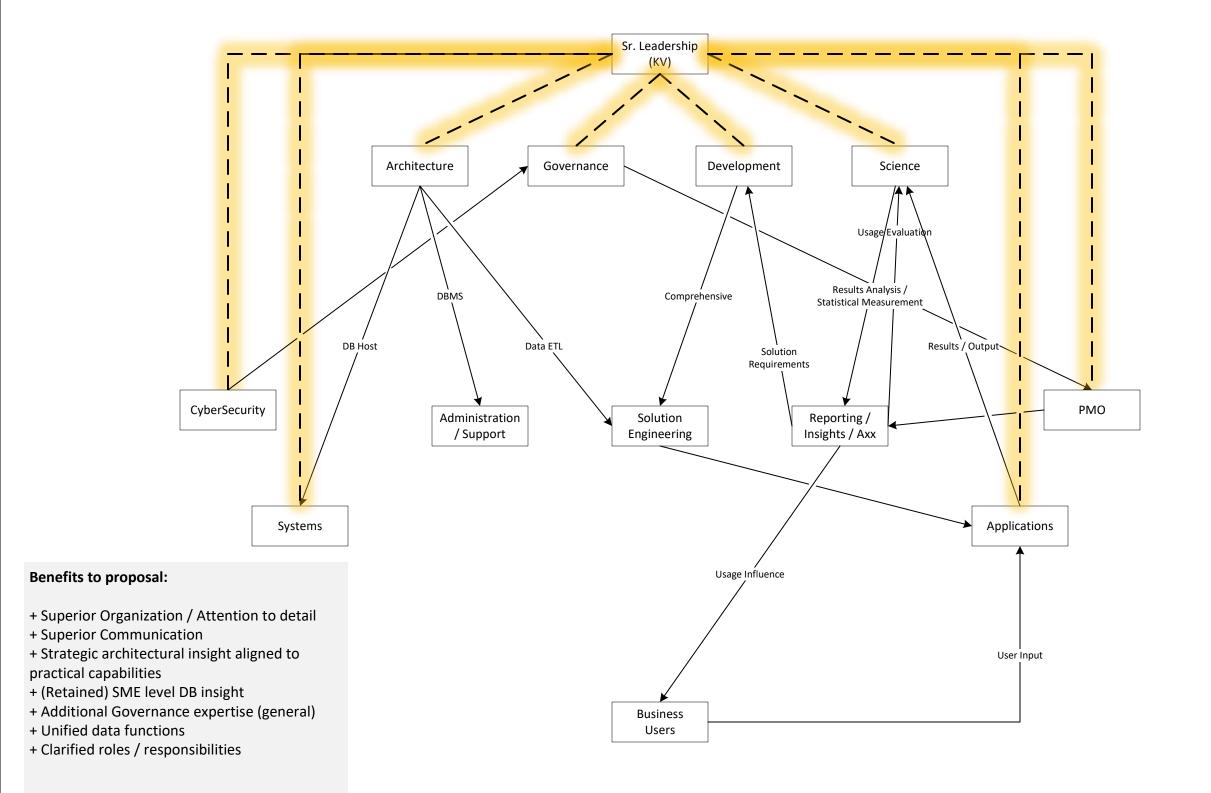
Support

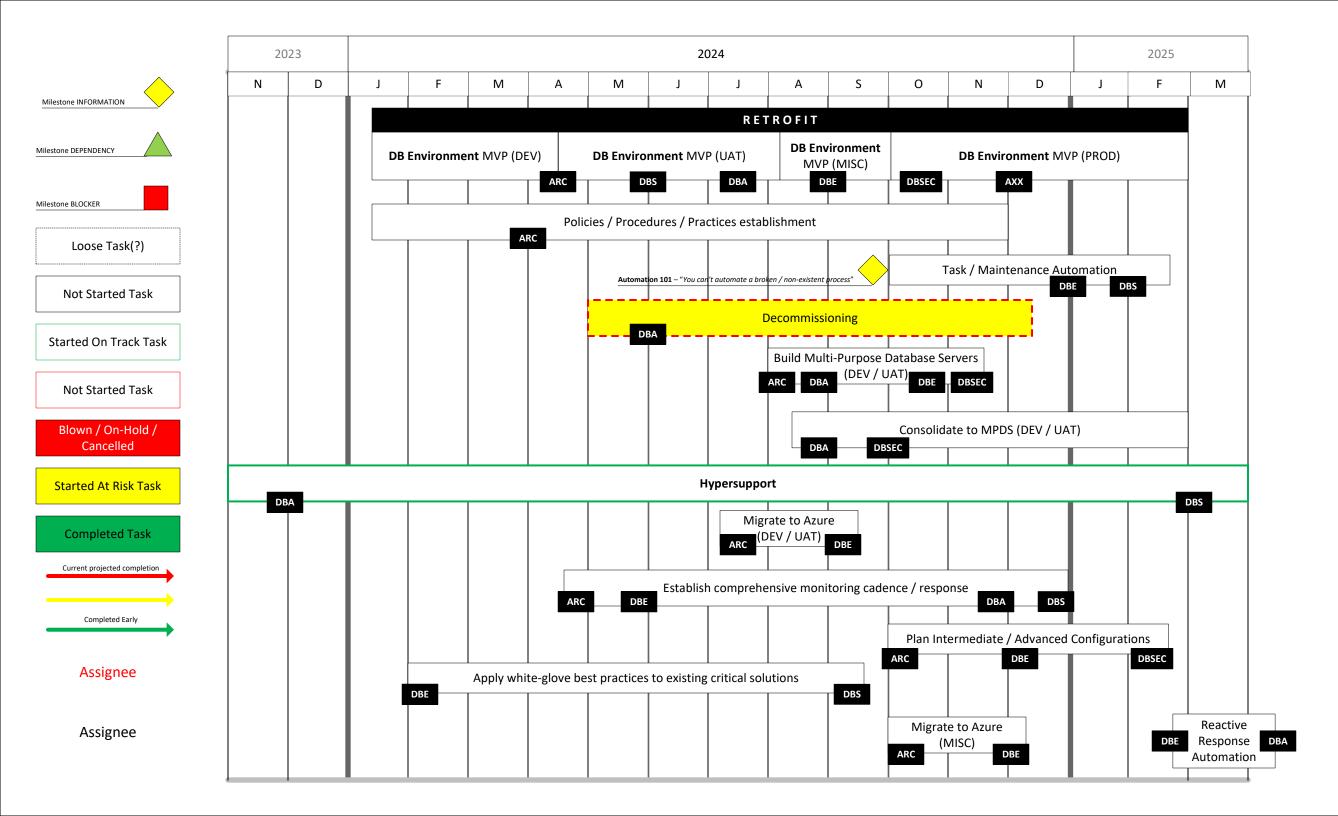
Engineering

Architecture

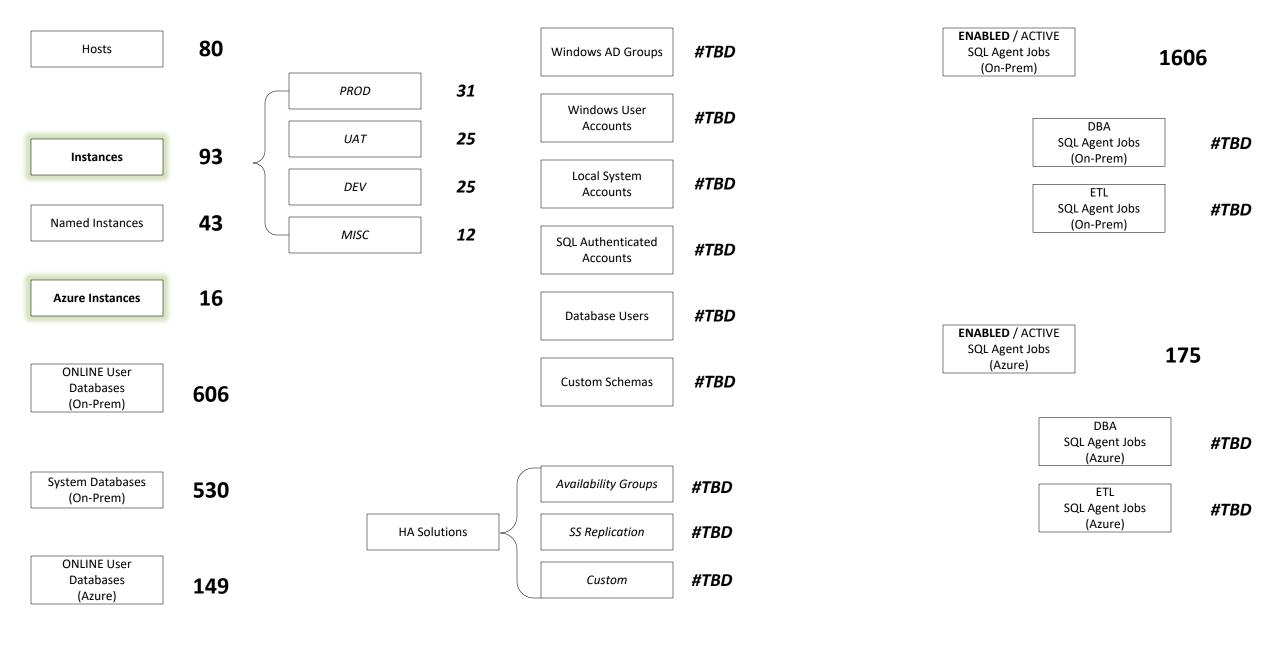
Security

Analyzing proprietary solution data to "make data driven business decisions"





Some environmental insight by-the-numbers



System Databases (Azure)

80

PROACTIVE / SELF-DRIVEN Database Projects / Tasks

"Make <Solution X> more responsive"

"Ensure zero downtime"

Pull data from <Solution X>

Troubleshoot /
Fix <Solution X>
during outage

Right-size environment footprint

Develop Production Release Deployment Process

Develop Permission Capture Process

Consolidate

Solutions

Automate

<Administrative

Task X>

Reduce Sprawl

Apply Basic Standards

Apply Intermediate Standards

Apply Mature Standards Unified Security

Consolidate Access

Develop Security Attestation Routine

Develop Standards (that reasonably conform to other groups' needs) Move "Data IT" to cloud

Migrate DEV to PaaS (Azure)

Migrate UAT to PaaS (Azure)

Reinforce Production Environments "Make data driven decisions"

Assess Reporting Needs / Capabilities

Develop Reporting Techniques

Evaluate PaaS Warehouse Solutions (Snowflake, DataBricks, etc.)

<u>REACTIVE / RECEIVED</u> Database Projects / Tasks – dictated by Solution Owners.

Hypersupport

Implement fine grained permission scheme

Stand-up DBMS to support new solution Create new database to support solution

Implement PaaS Warehouse Solution

> Support PaaS Warehouse Solution

Apply (approved) permission requests

Code promotion / Release Deployment

Create / Configure / Support "Replication"

Triage / Troubleshoot