



An Application Depth Analysis using SAS Component Services with .NET Component Services (T)

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Analytical Objectives

What are SAS Component Services?

What are .NET component services?

Motivation Factors

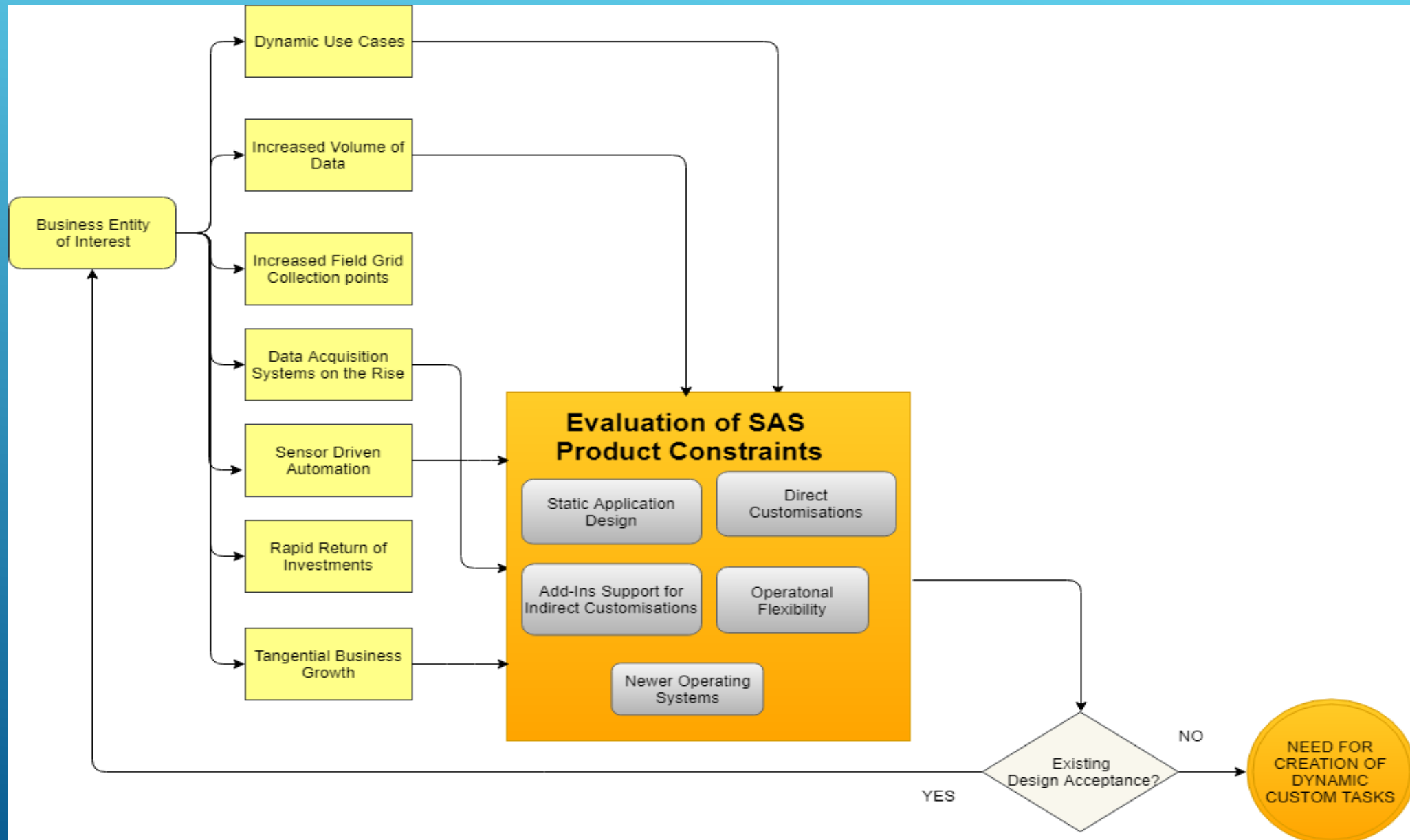
Is business growth balancing on existing SAS Client Application?

Is it feasible to model business use cases using Adaptive SAS and .NET component services?

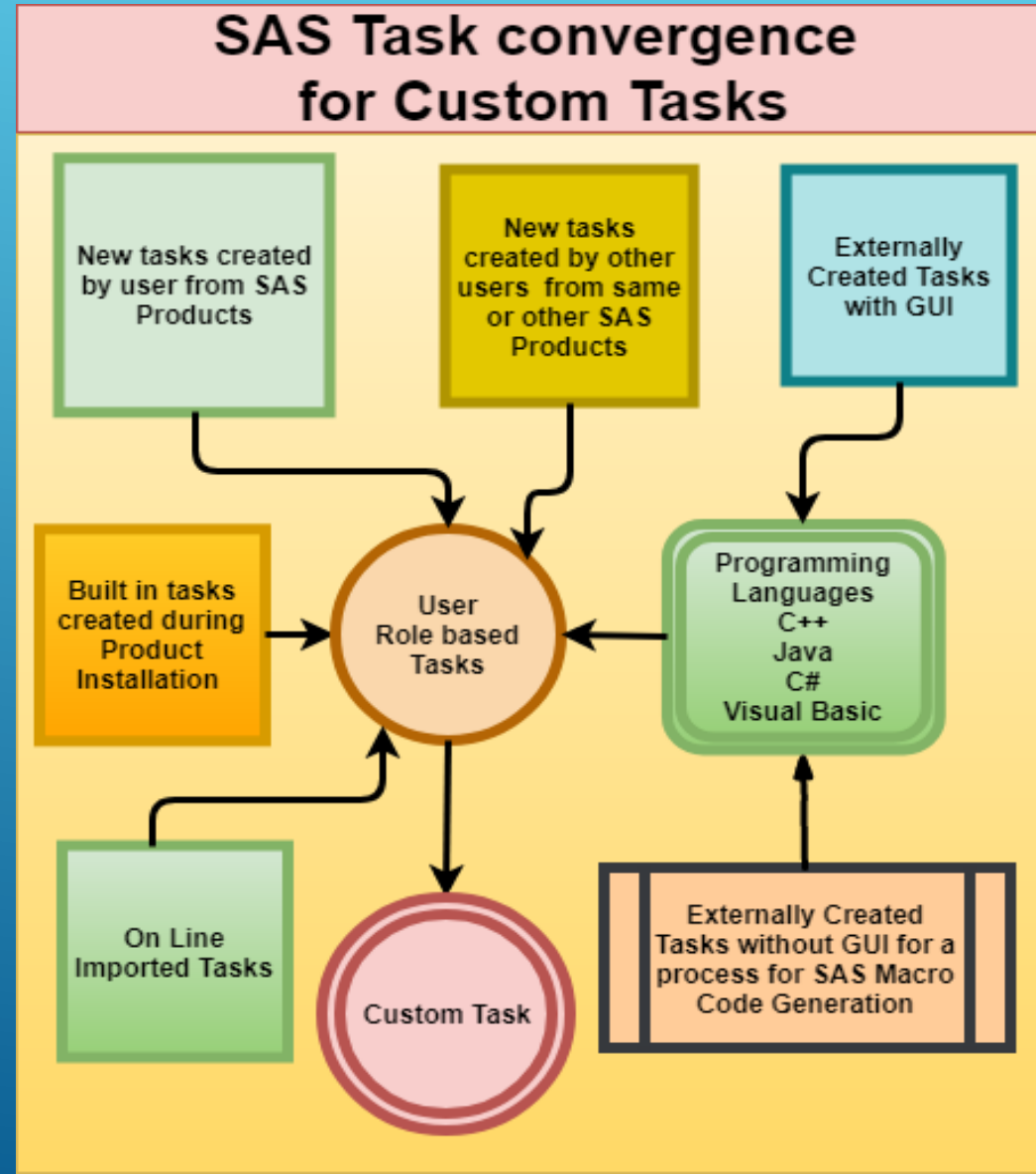
Motivation aspects for SAS Products that consume SAS-.NET Component Services?

- ❑ SAS Enterprise Guide
- ❑ SAS Viya
- ❑ Azure Cloud Based Client for
 - SAS Enterprise Guide, SAS Grid and/or with
 - SAS Viya Template for Azure

Business Growth vs Design Constraints



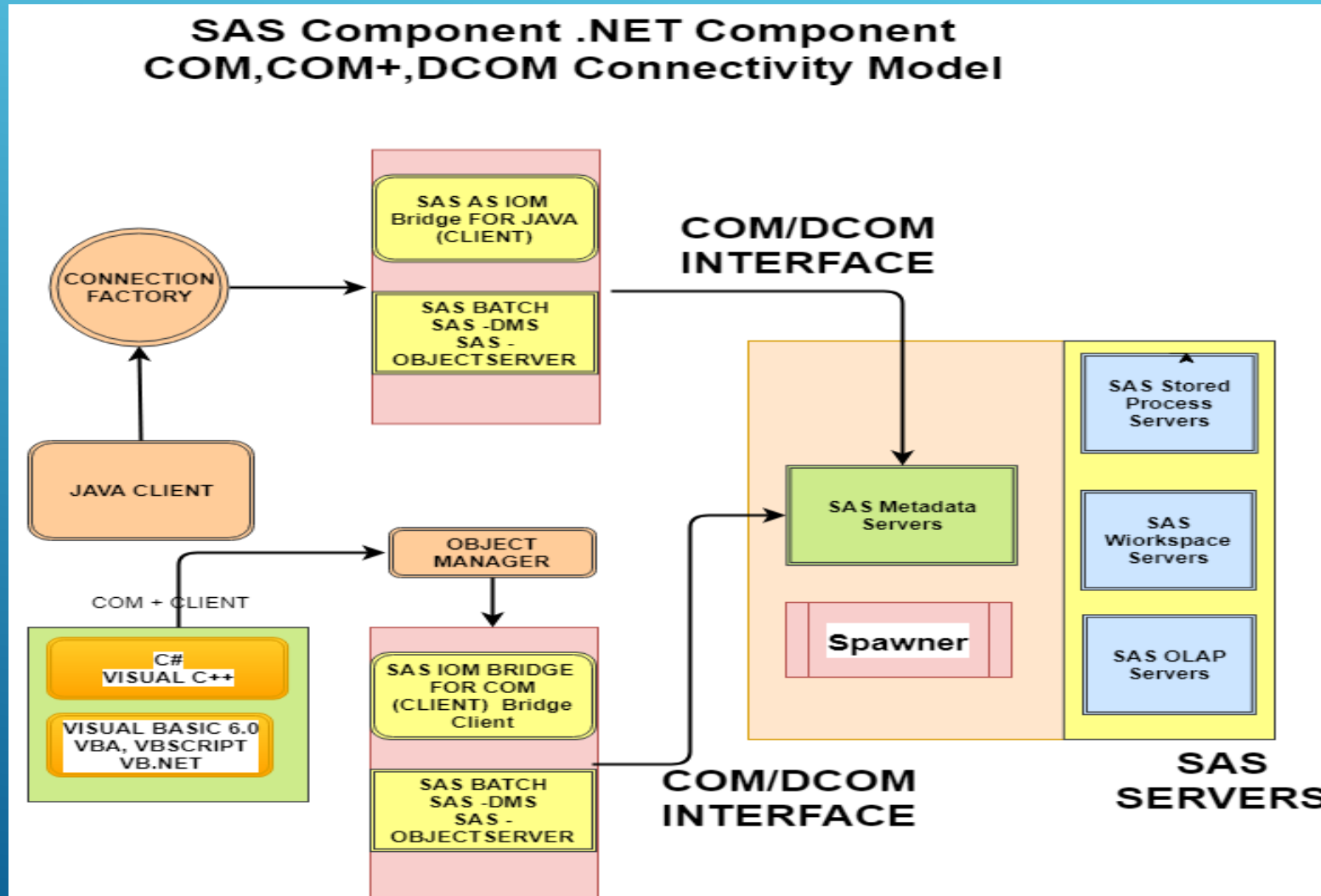
Automation of Custom Tasks?



Benefits of Complex Custom Task Automation

- Direct control of menus, tasks and other parts of SAS EG
- Dynamic business use case based custom tasks creation
- Maintainability of custom tasks on large on-line imports
- Can use user driven auto custom task filter
- Platform Independence of custom tasks creation

SAS Component .NET Component COM,COM+,DCOM Connectivity Model



Platform Independence of Custom Cask using .NET Component Services

- Usage of Windows API code by component services
- Algorithmic and Non Algorithmic Models for Generation of SAS Macros for processing SAS Datasets
- Generation of direct GUI functionality for custom tasks
- Intelligent balance of business use cases with new and existing custom tasks
- Expertise of classification on known custom task for re-usability for other use cases.

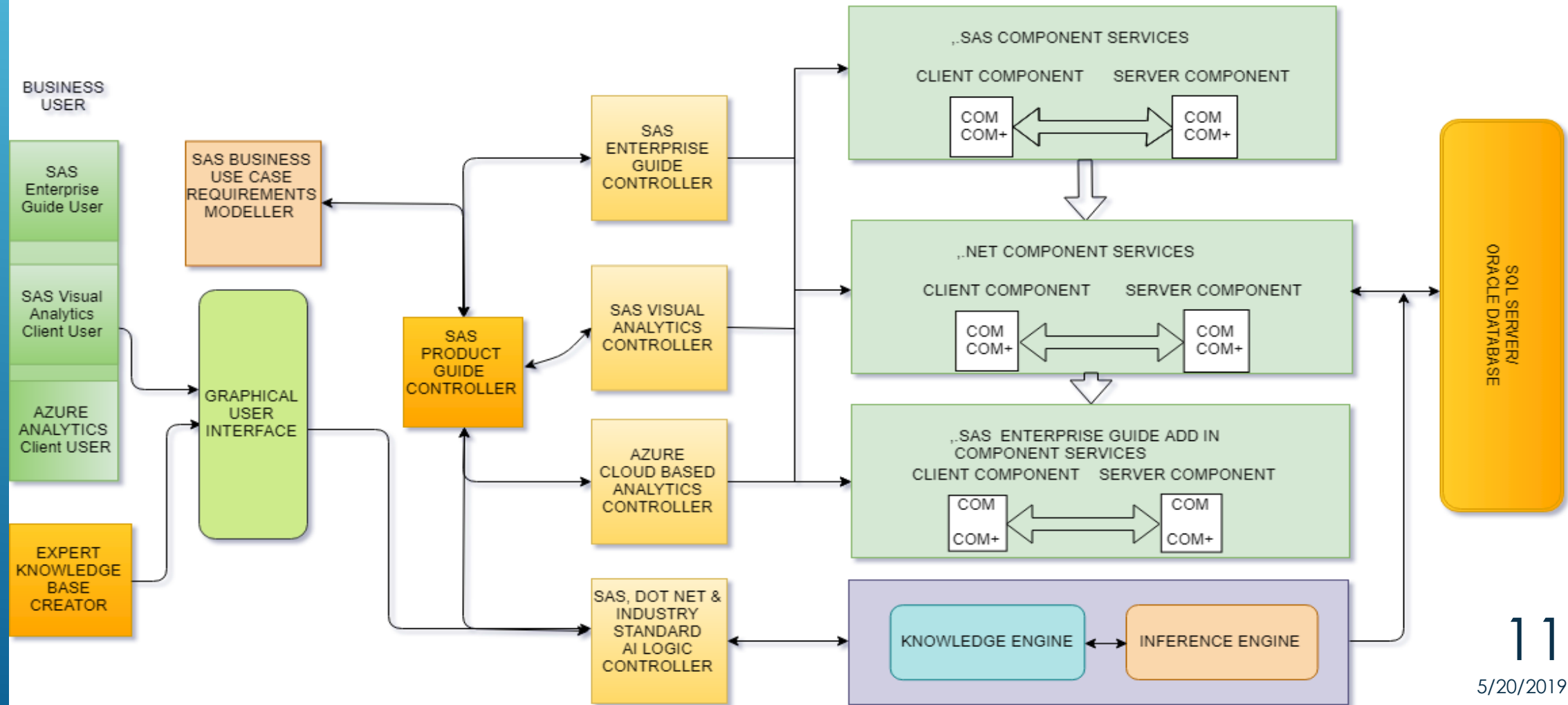
Need for AI Model for Non Algorithmic Stochastic Processing in .NET Component Services

- ❑ Declarative Logic Programming
- ❑ Uncertainties to certainties ratios are very high and fuzzy.
- ❑ Facts based Managed and Unmanaged Code API Capture
- ❑ Building Expert System Shell for business use case model
- ❑ Combinatorial Logic Rules using Statistical Methods for template based SAS macro generation
- ❑ Building Situational based Rules Based Agenda Datasets and Subsets
- ❑ Building Inference engine using declarative programming
- ❑ Firing rules till convergence on business use cases are met
- ❑ Transformation of result set to algorithmic model for Component Services implementation

Design of .NET COMPONENT SERVICES FROM SAS COMPONENT SERVICES

Created by Hemant Raj, Jupiter Software Technologies Ltd, Wellington, New Zealand

This design is SAS Business Application using SAS and .NET component services with dynamic intelligent updates to SAS Products of SAS Enterprise Guide, SAS Visual Analytics, Azure Cloud Based Analytics from Expert System Shell Programming



SAS Component and .NET Component Services with Custom Task Integration

- ❑ Custom Tasks are created as .NET component using SAS Interface components
- ❑ Custom Tasks are directly added to SAS Product like SAS EG using Component Services
- ❑ Options available to use Add-In Manager for deployment or override based on complexity of Custom tasks

Future Directions

- ❑ Parallel Tasks processing for component services for algorithmic and non algorithmic datasets is needed
- ❑ Improvement on Client Server Object Processing of Binary Function Pointers
- ❑ Logic Programming API Integration Enhancements

Conclusion

Is business growth balancing on existing SAS Client Application?

Yes

Is it feasible to model business use cases using Adaptive SAS and .NET component services?

Yes

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