Americas' SAP Users' Group

How EY overcame the challenges in adoption of SAP Commercial Project Management using SAP Lumira (Design Studio) in managing its professional services projects. How SAP Max Attention helped EY in this journey efficiently.

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Session ID 83045

About the Speakers

Douglas Hallan

- Strategy & Architecture Lead, Program Mercury, EY
- Over 20 years with EY, starting in Luxembourg, through New Jersey & Atlanta
- Fluent in 5 languages inc. Luxembourgish.

Goutham Goudgere

- Engagement to Invoice lead, Program Mercury, EY
- Senior Manager at EY in the SAP Advisory Services group with experience in SAP CPM, Design Studio(Lumira) and RPA technologies
- Love travelling to exploring national parks

Mahesh Babu MG

- Support Architect, SAP MaxAttention CoE
- Over 12 years with SAP covering manufacturing and PLM topics
- Exceptional cook with CPM/Performance expertise

Key Outcomes/Objectives

1. Present an overview of the challenge of Mercury, with a focus on CPM
2. Present how EY & SAP worked together to resolve CPM usability & performance issues
3. Present how EY is now moving into robotics to enhance the usability.

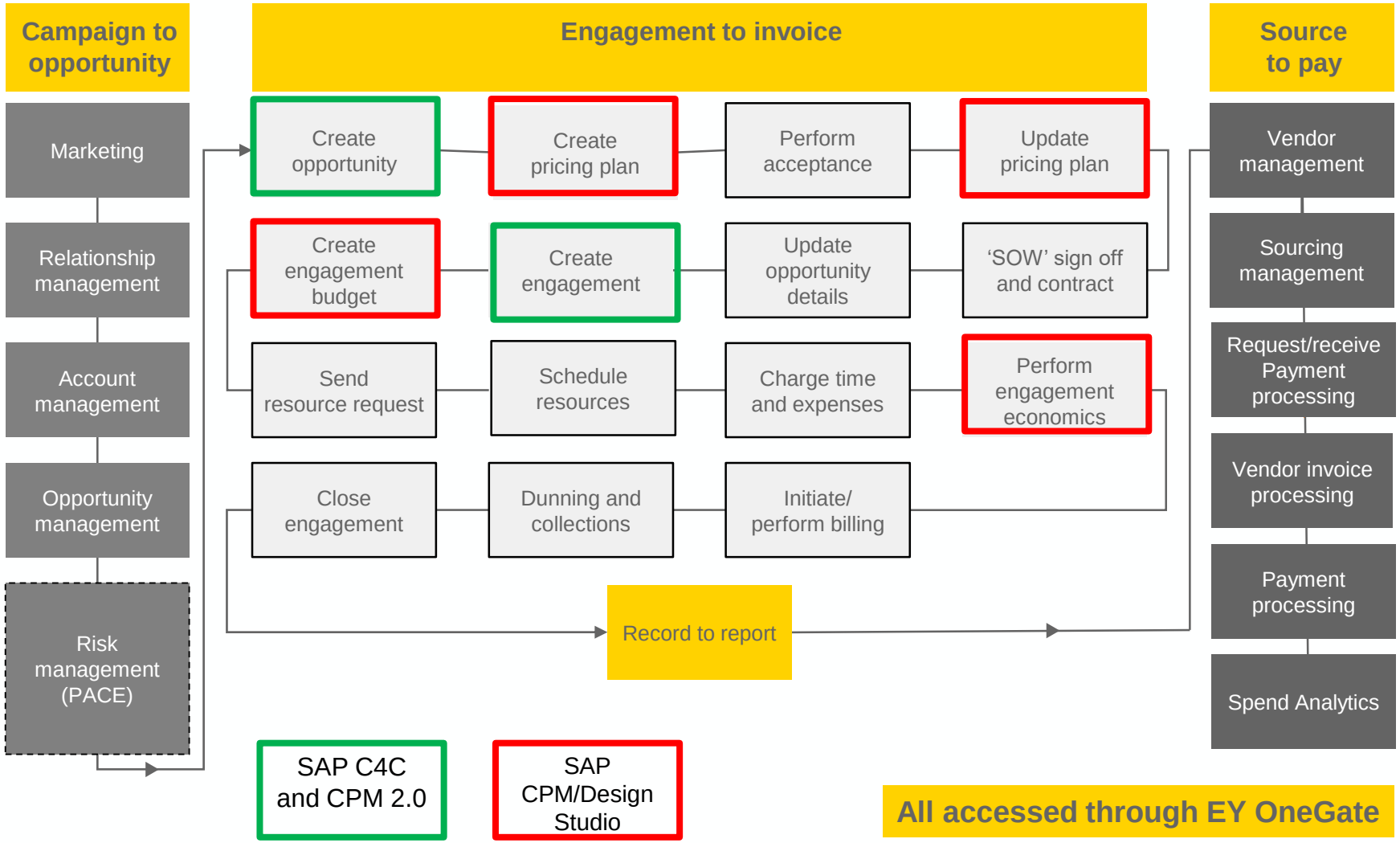
Agenda

- Overview of Mercury
- Insight into initial challenges with CPM
- Approach taken to resolve CPM issues
  - Use of SAP Design Studio/Lumira for increased usability & performance
  - Performance testing & defect resolution with SAP MaxAttention
- Future use of attended robots to aid usability

What is Program Mercury?

- Program Mercury is EY's global SAP ERP & CRM implementation.
- Objective to deploy a single instance, single set of processes to all EY member firms, streamlining the approach to key processes, inc.
  - Opportunity & Pursuit Management
  - Engagement Management, inc. Time & Expense Capture
  - Record to Report
  - Source to Pay
- Solution is based around the "classic" SAP solution set, with the addition of SAP Sales Cloud (C4C).
  - Future planned components inc. SAP Concur

Mercury is an integrated solution



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Program Mercury Timeline

- Mercury was deployed as a pilot in Canada and GSA (Germany, Switzerland, Austria) in January 2016
- South Africa, Botswana and Namibia in April 2017 went live
- The US, EYC (EY Carribbean) and BBC (Bermuda, Bahamas, Cayman Islands) in January 2019.
- Deployments are planned to continue in multi-country waves throughout the next 24+ months

Initial challenges with CPM

CPM was chosen early in the overall design to support the engagement management processes

Design of the use of CPM was complex

- Numerous metrics required to be calculated
- 13 different types of workbooks were created for different types of core engagement management processes, inc. Budgeting & Estimate-to-complete calculations

User feedback after the initial go-live was not positive:

- Users had issues with the use of Excel-based templates
- Performance was poor opening workbooks (including workbooks failing to open after 5 mins)
- Overall system performance was impacted

Although the system had gone through full end-user testing, real-life experience gave different feedback.

Outcome of initial assessment

- Working with SAP MaxAttention, several items came to light:
  - Complexity of the queries
  - Older versions of SAP BO Analytics for Office in use.

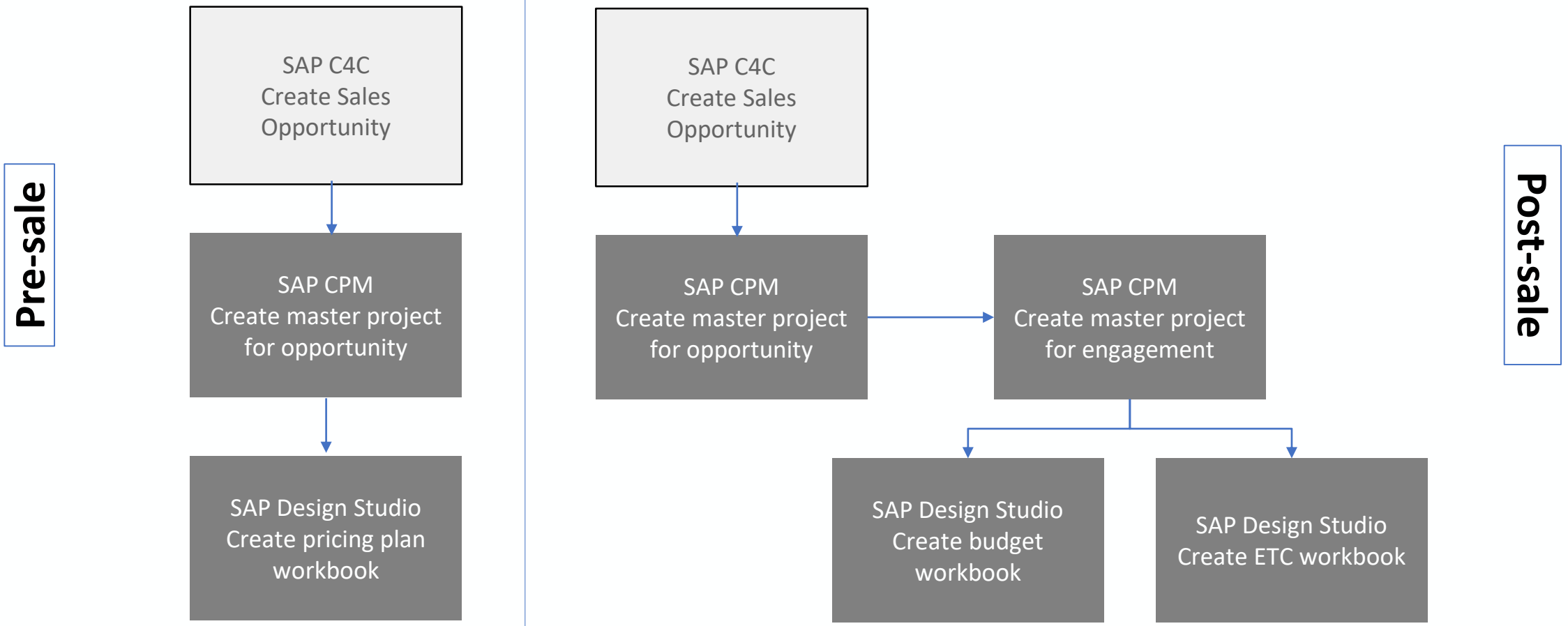
- First proposed step was to work on providing up to data SAP BO AO versions.
  - Highlighted the challenge of keeping the desktop solution up to date
  - Concern around conflicts with other Excel plug-ins
- Further assessment by SAP MaxAttention indicated that for the proposed usage model and volume, the DB server was undersized
  - EY team undertook an infra re-sizing exercise with hosting partner

- EY requested deeper assistance from the SAP product team to help resolve performance issues

Use of Design Studio/Lumira

- SAP product team highlighted that queries could be called using Design Studio
  - EY team built prototypes as a POC
  - SAP confirmed that approach would be supported
- Design Studio offered a full web-based experience
  - Required new BO infrastructure
  - Removed the requirement for desktop deployment
  - Matched to the planned roadmap for SAP CPM
- Joint EY/SAP team worked to deliver planned workbook functionality by September 2017
  - System Integration Testing & Performance Testing planned
  - Go-live planned for Feb 2018

Engagement planning using SAP CPM and Design Studio



- * Design studio replaced excel analysis office workbooks post pilot feedback and issues

Performance Issues

- Performance testing challenges
  - Complex testing schedule involved multiple workbook types and high volumes of queries
  - Workbooks were diverse in size, ranging from as few as 5 rows to over 100 rows
  - Data had to be identified or generated
- Working with SAP MaxAttention, the team ran multiple performance test cycles:
  - SAP MaxAttention provided monitoring of the system throughout performance runs.
  - Overall performance was consistent up to 400 users (compared to single-user baselines taken in a QA environment)
  - Above 400 concurrent users, solution performance would decrease significantly due to record lock conflicts – this would cause multiple retries for record locks, even within the same engagement record
  - Tests would regularly fail
  - Primary issue was with record locks within the BI-IP stack used by CPM
  - Overall, this was a time consuming process requiring a lot of preparation and system time
- Despite these issues EY agreed to a Feb 2018 go-live for the initial solution with Design Studio
  - User peak would not go beyond 400 users at that time
  - SAP Escalation team were working on a resolution to the locking contention for higher peaks (as expected with the US go-live)

Locking issue resolution w/SAP

- Working with the SAP Escalation team, an approach to resolving the locking issues was been selected. Several alternatives were discussed; the preferred approach is considered the least risky:
  - Solution utilizes existing locking framework. The solution, however, moves from a common locking argument to an engagement specific lock.
  - The initial locking design required all locks to be done serially leading to locking conflicts and delays. Proposed solution allowed locking to be done on multiple requests simultaneously (providing the requests are for different engagements), therefore almost entirely eliminating locking delays / retries.
- The initial fix was coded for EY (as an enhancement to an existing locking class; is not an SAP Core modification).
  - Fix was validated in the Sandbox for functionality and was applied to the environment for volume testing
  - Locking fix was proven to only interact with workbooks, and other functions that invoke planning functions (e.g., CPM Financial Plan Page).

Final resolution

- Initial SAP Customer Note went into Production end of March 2018
  - A further application of the official SAP note was made in May 2018
- In addition, hardware assessment results drove to an upgrade of Production hardware in April 2018
- Overall usability and performance were increased significantly
  - Open Workbook performance increased to an average response time of 18s
  - Workbook valuation average performance now around 20s
    - Dependent on the size of the workbook (very large workbooks will take longer)

Next Steps on Usability

- Resolution of initial usability and performance concerns unearthed a deeper need to work on overall usability
  - Not all users are regularly in the workbooks, leading to struggles with usage (and adoption)
  - Despite a large effort, there is still complexity in the solution due to complex business processes
  - Increase in ticket volume for data entry, and simple transaction errors put a strain on supporting resources
  - Quality of data captured within Mercury is impacted either due to missing/incomplete fields
- In addition, EY's leadership sought to limit "homegrown" or local solutions performing the same functions
  - Maximise the support of the global process
  - Maximise the use of the global investment in Mercury

Use of robotics and automation

- In early 2018, EY began investigating where RPA or AI could be leveraged to assist client serving personnel
  - Included a deep dive with SAP on their planned roadmap in these areas.
- In mid 2018, EY initiated a project around Mercury to provide a series of attended bots, specifically around:
  - Opportunity Creation & Management
  - Engagement Creation & Management
  - Invoicing
- Bots will provide a scripted experience for end-users

Key Objectives for Usability Workstream

Objective	Benefits
Focus on improving the overall usability of **client server** executed processes	▸ Reduce overall clicks/time take to complete transaction ▸ Local change management teams to focus training/ communication on the behavioral changes required to successfully deploy Mercury instead of transactional training ▸ Increase overall data quality through standardized mercury transaction creation
Increase overall client server adoption of Mercury	▸ Reduce overall finance support costs focused on 'how to' and other related guidance due to usability ▸ Eliminate the need for transaction support
Ensure as little/no change required to underlying Mercury transactions/systems/architecture	▸ Less/no change to underlying Mercury screens will mean less overall cost for usability improvements ▸ Using existing Mercury screens will ensure data integrity in the Mercury system and utilization of existing controls
Enable a global client server usage model	▸ Significant reduction in cost/maintenance challenges with regional or country defined BOT processes ▸ Global processes allows for flexibility through configuration tables and not through separate BOTs

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Usability Automation

- The proposed solution is in System Integration Testing
  - Is also being Performance Tested to ensure support for high user counts
  - SAP MaxAttention continue to provide support to ensure no conflicts with the system design
- Planned for pilot release in July 2019
  - Full roll out to all existing Production countries by end 2019

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Q&A

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