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Americas' SAP Users' Group

Securing the Largest Global Implementation of SAP S/4HANA

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SAP | **SAPPHIRENOW** | **ASUG** ANNUAL CONFERENCE

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About the Speakers

Fiona Williams

Partner, Deloitte & Touche LLP

- 25 years of experience designing, developing, and implementing SAP security, controls, and governance, risk, and compliance (GRC) solutions
- Deputy CIO and CISO at Deloitte responsible for the internal S/4HANA implementation
- An Adult Third Culture Kid (ATCK)

David Jayne

Senior Manager, Deloitte & Touche LLP

- 15 years of experience designing, developing, and implementing SAP security, controls, and GRC solutions
- Lead for SAP security, controls, and GRC workstreams on S/4HANA implementation
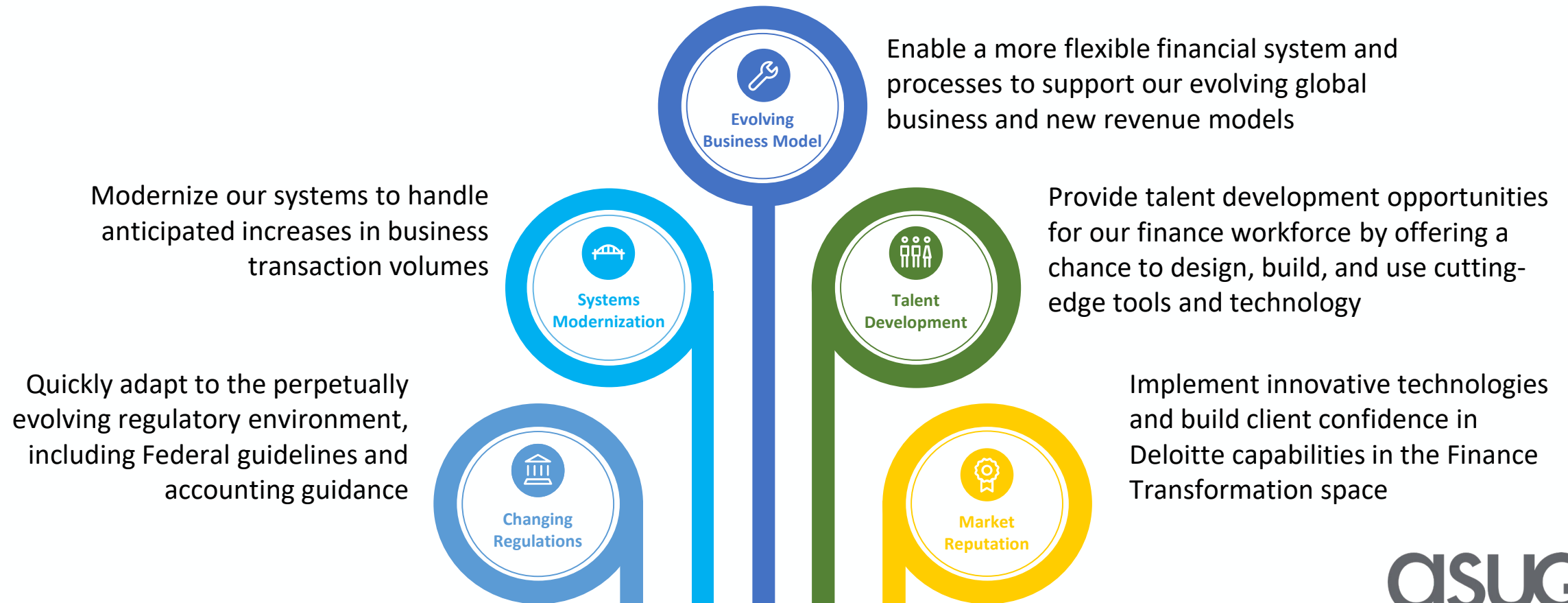- Has royal ancestry (according to research on Ancestry.com)

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Agenda

- Deloitte's Global S/4HANA Journey
- Globalization Impacts And Resolutions
- GRC Approach
- Security Approach
- Controls Approach
- Key Takeaways

The case for change

Deloitte has achieved significant growth over the past 20 years, and as a result, we evolved to support our changing businesses on a global scale
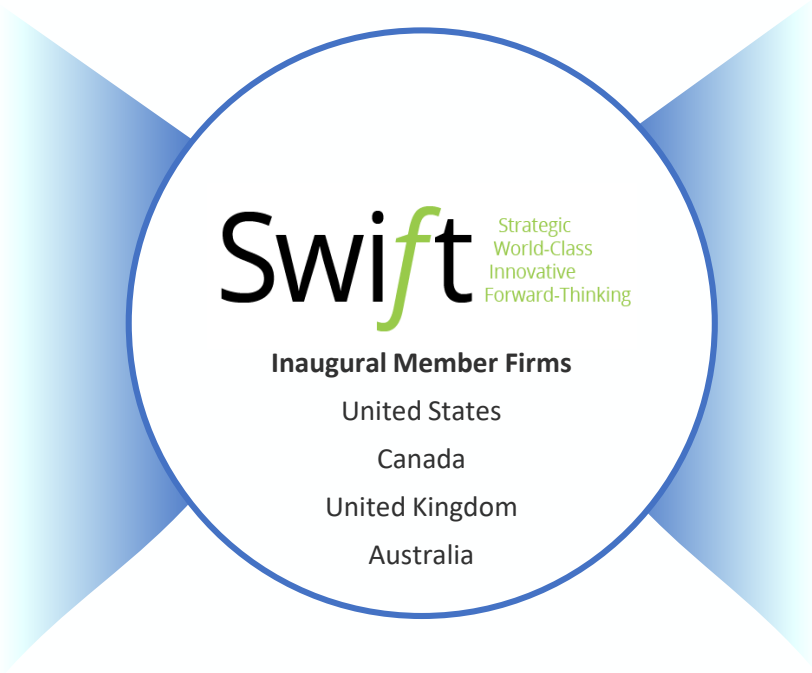

Evolving Business Model

Enable a more flexible financial system and processes to support our evolving global business and new revenue models

Systems Modernization

Modernize our systems to handle anticipated increases in business transaction volumes

Talent Development

Provide talent development opportunities for our finance workforce by offering a chance to design, build, and use cutting-edge tools and technology

Changing Regulations

Quickly adapt to the perpetually evolving regulatory environment, including Federal guidelines and accounting guidance

Market Reputation

Implement innovative technologies and build client confidence in Deloitte capabilities in the Finance Transformation space

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Introduction to SWIFT

SWIFT is transforming Deloitte's Finance processes, technology, and organization.

Strategic, World-Class, Innovative, and Forward-Thinking

SWIFT Features (SAP S/4HANA)

- Global Platform
- Local Needs
- Latest Technology
- Scalability

Swift
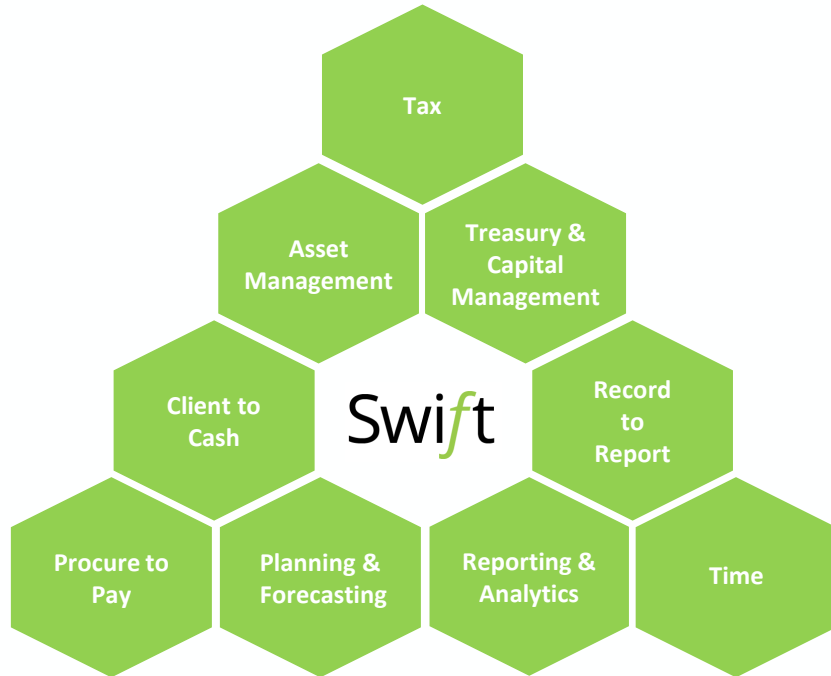Strategic
World-Class
Innovative
Forward-Thinking

Inaugural Member Firms

United States

Canada

United Kingdom

Australia

SWIFT Outcomes

- End-to-End Integration
- Data-Driven Insights
- Refreshed Revenue Recognition
- Focus on Profit
- Optimize Efficiency
- Consistent Project Management

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SWIFT process scope and timeline

SWIFT is a multi-year program that will impact nine key functional areas across the Deloitte finance organization.

In-Scope Processes

- Tax
- Asset Management
- Treasury & Capital Management
- Client to Cash
- Swift
- Record to Report
- Procure to Pay
- Planning & Forecasting
- Reporting & Analytics
- Time

Timeline

- **Global SWIFT Program Established** — *Summer 2016*
- **Wave 1 Go-Live** — *Winter 2017*
- **Wave 2 Go-Live** — *Fall 2018*

SWIFT technology landscape

SAP technologies at center stage for the SWIFT finance transformation.

SAP S/4HANA	Business Planning and Consolidation (BPC)
Fiori	Master Data Governance (MDG)
SAP HANA Sidecar	Financial Supply Chain Management (FSCM)
SAP Ariba	Cross Application Time Sheet (CATS)
Commercial Project Management (CPM)	GRC

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SWIFT key Impacts

Changes were far-reaching and aimed to benefit a large part of our organization.

Refreshed Project Financial Management
> Deliver intelligence to enhance engagement economics
> [First major organization to work with SAP in implementing CPM 2.0 on HANA]

Modern User Experience
> Teams can quickly access relevant real-time information through an intuitive and user friendly interface (i.e., visual dashboard)

Global Chart of Accounts
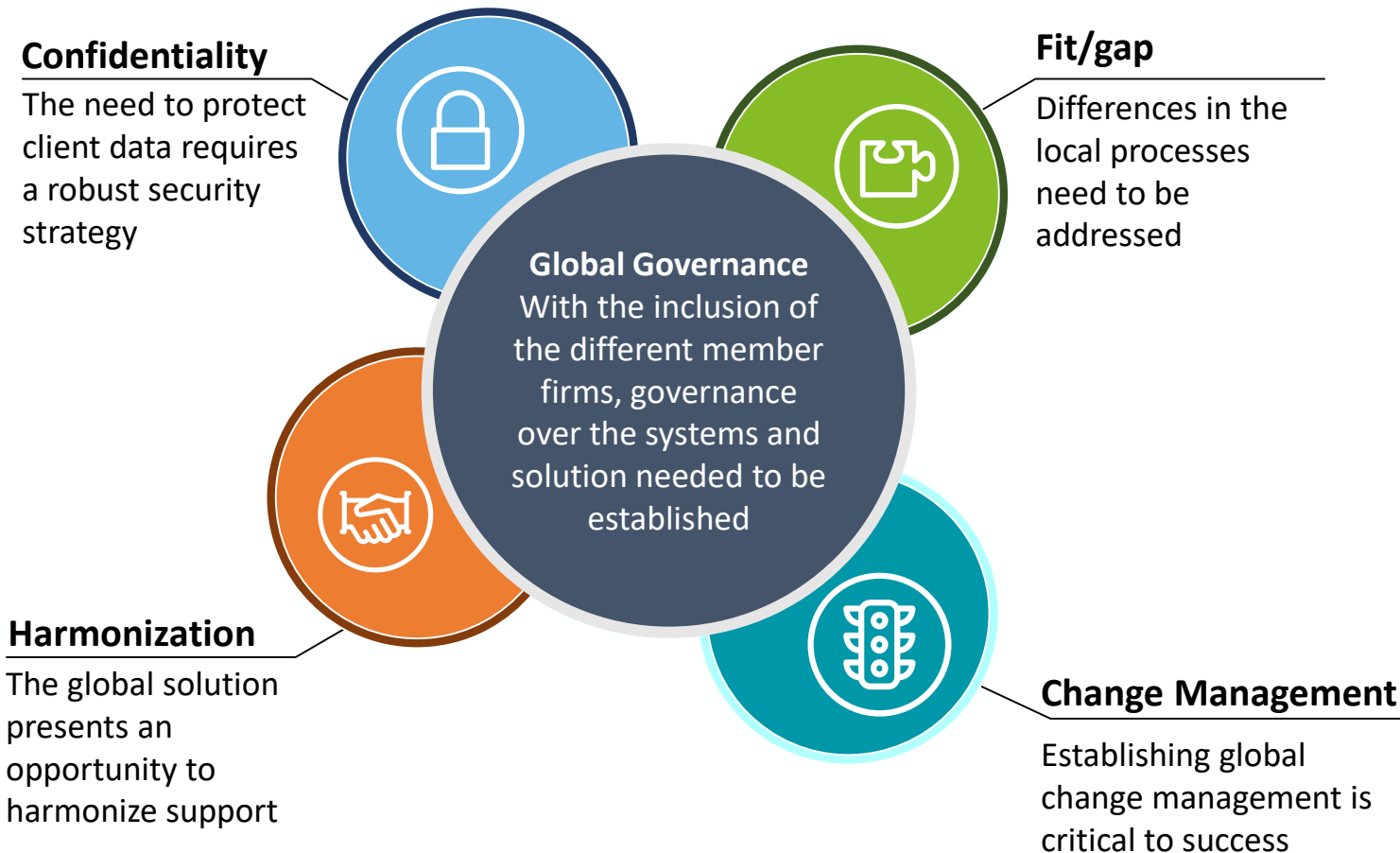> Single global ledger with intuitive and logical account groupings that are scalable

Consistent KPIs
> Centralized global KPIs across the Deloitte network of member firms to uniformly measure the health of the business

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Globalization requirements

Globalization requirements

We deployed our security, controls, and GRC solution to address requirements

Confidentiality
The need to protect client data requires a robust security strategy

Fit/gap
Differences in the local processes need to be addressed

Global Governance
With the inclusion of the different member firms, governance over the systems and solution needed to be established

Harmonization
The global solution presents an opportunity to harmonize support

Change Management
Establishing global change management is critical to success

Globalization requirements solution

We levered SAP GRC to help us address the globalization requirements

Impact	Resolution
Confidentiality	• **Secure Provisioning**: Identify appropriate approvers of confidential access route all request to them. • **Sensitive user access review**: Enforce reviews of confidential access on a semi-annual basis.
Fit/Gap	• **Control Repository**: Build complete listing of controls and clearly identify member firm relevance. • **Central point to manage risk**: Set up one global GRC instance to access, business process, and IT risks.
Change Management	• **Role change approval**: Enable workflow approval of all business and single role creation or changes. • **Control Monitoring**: Design rules in Process Control to identify changes in key configuration.
Harmonization	• **GRC governance model**: The GRC solution is serving as a model for the overall establishment for a global governance foundation.

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GRC approach

GRC global deployment solution

GRC Access Control (AC) was deployed and Process Control (PC) was implemented as part of the cornerstone of the global governance solution

	Goals	Functionality
Access Control	• Enable business ownership of role content and role access • Develop global segregation of duties (SOD) framework to streamline access management and drive visibility into access violations • Enforce emergency access management to require appropriate approval and drive accountability • Establish global user access review process to refresh security access	User Access Management Emergency Access Management Access Risk Analysis Business Role Management User Access Review

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GRC global deployment solution

GRC Access Control (AC) was deployed and Process Control (PC) was implemented as part of the cornerstone of the global governance solution

Goals		Functionality
Process Control	• Enable automated compliance as part of the foundation of the global design • Leverage monitoring functionality to bring an integrated compliance view • Standardize the control frameworks and drive control ownership	Continuous Control Monitoring Control Surveys

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Application security approach

Guiding principles

Established guidelines are important to maintain a flexible security design
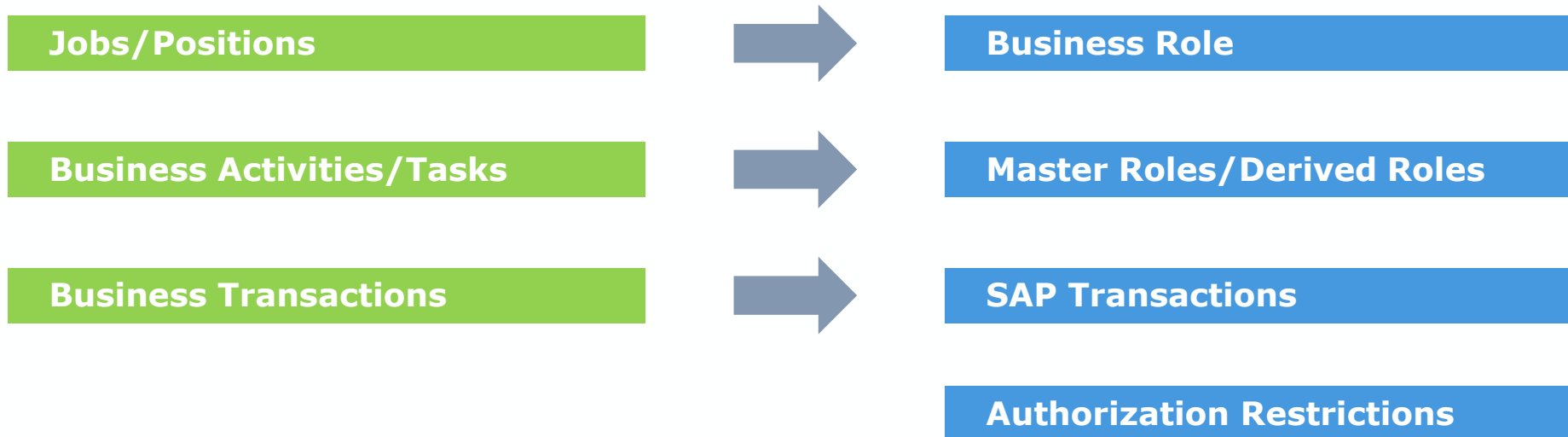
- **No transaction code duplication** - Transaction codes will not be assigned to multiple task-based roles (except based on restriction requirements)

- **Security roles are SOD-free** - All roles are free of SOD conflicts. This eliminates the possibility that users are assigned SOD conflicts by receiving one business role.

- **Only GRC business roles are assigned to end users** - All derived roles are mapped to business roles which can be assigned to end users. No roles will be designed to bypass business role assignment.


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Swift security model
The global solution required a scalable, flexible role security design

- The SWIFT security model is designed utilizing a task-based security approach.
- The individual activities performed in business process are identified and the associated business transactions are grouped into business activities.
- The organizational restrictions for the business activities are employed by creating geographical derivatives called derived roles.

Jobs/Positions	→	Business Role
Business Activities/Tasks	→	Master Roles/Derived Roles
Business Transactions	→	SAP Transactions
		Authorization Restrictions

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Security design approach

The "least privilege access" concept was used when assigning access to users
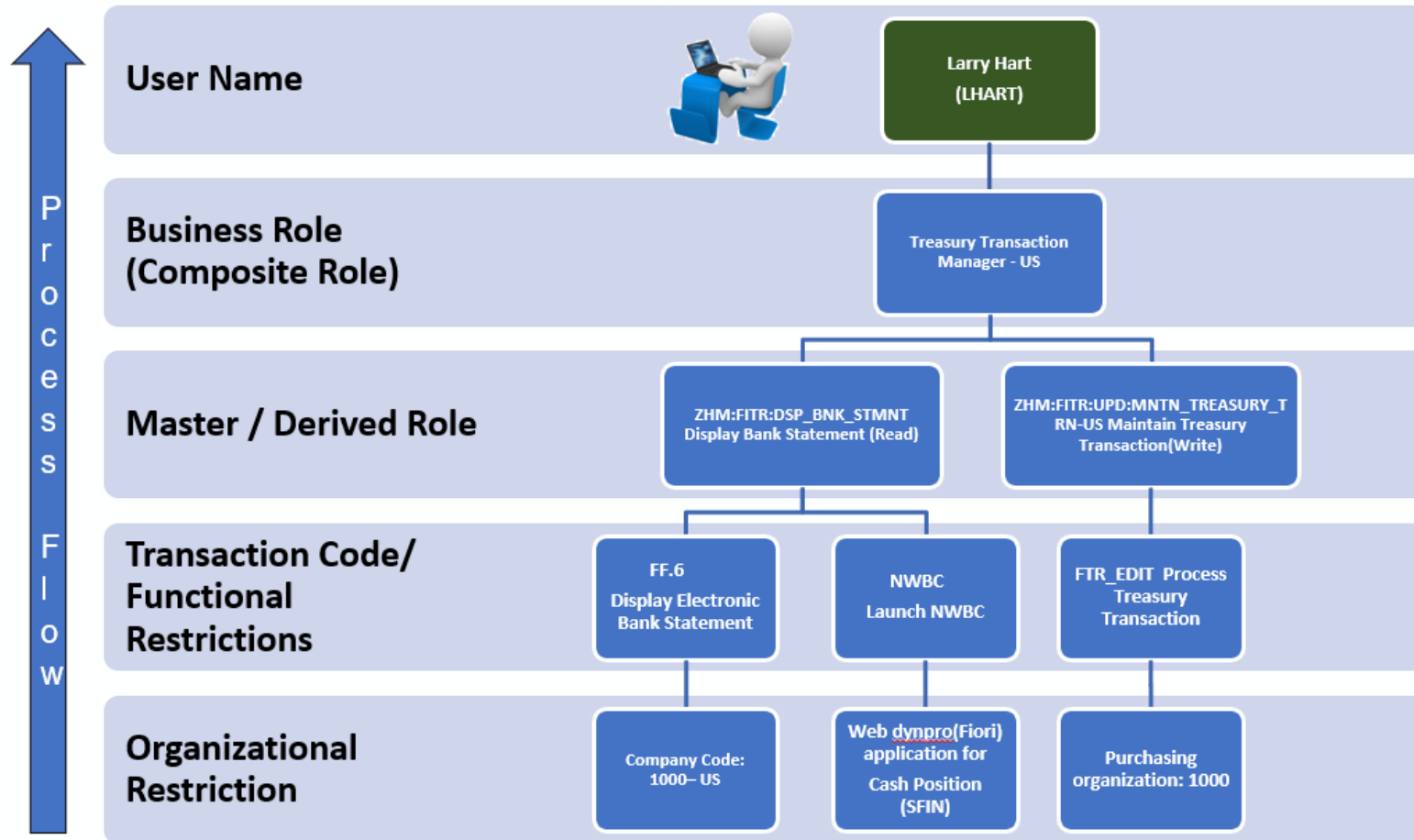
Integration of technical roles with business roles

The diagram below shows the S/4HANA roles are integrated with the Fiori role using GRC business roles
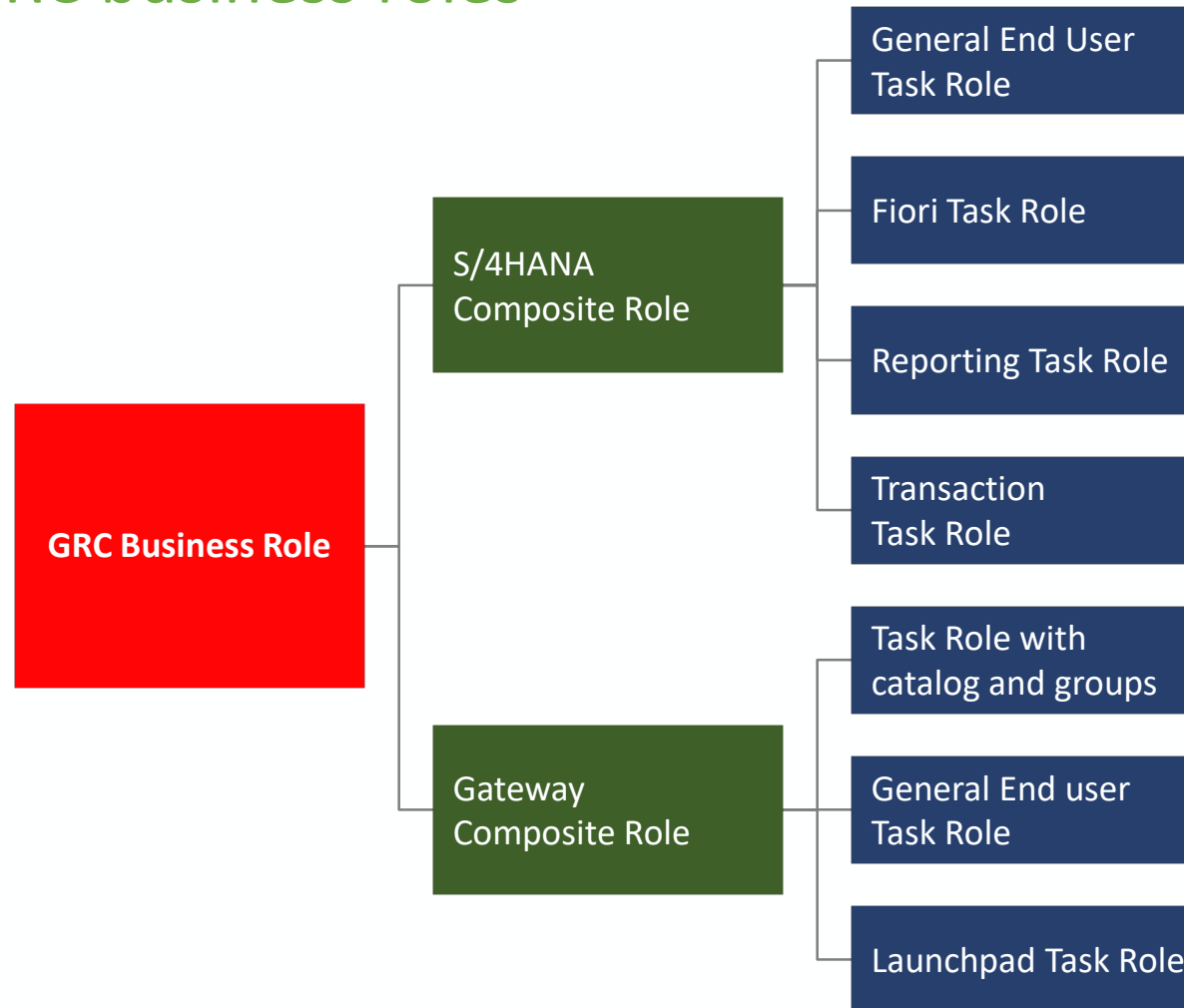
Segregation of duties (SOD) approach

SOD ruleset Fiori additions

Fiori permission checks were embedded in the SOD Ruleset

**01** Fiori security only checks for oData service and authorization object access

02 As a result, the SAP ruleset must be include Fiori App permission-level checks

03 For adding Fiori apps to the SOD ruleset, no transaction code information is available

04 We leveraged the dummy t-code concept and corresponding permissions in the SOD ruleset

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SOD ruleset: t-code vs. Fiori Differences

We identified different steps to determine authorization objects
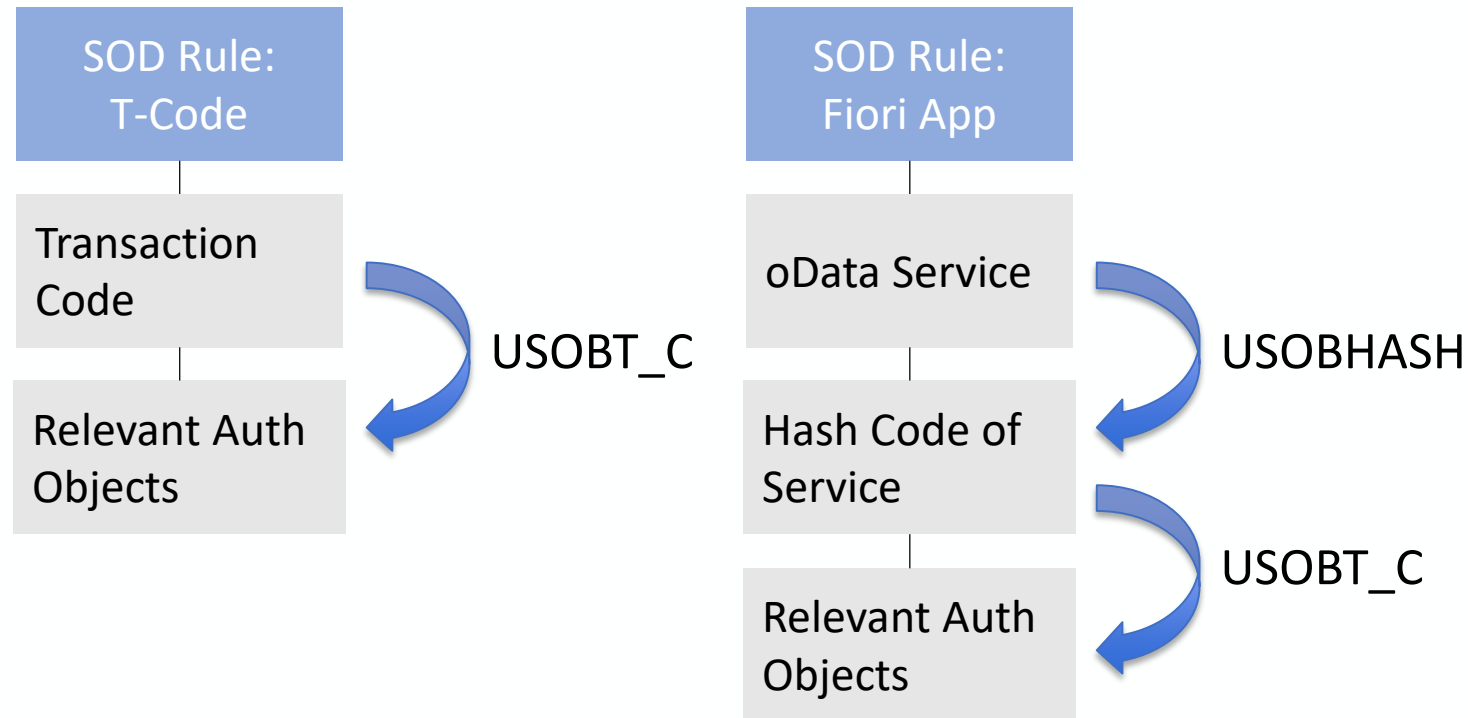
Key Tables:

- **USOBHASH** *provides mapping of oData service and its corresponding hash code.*
- **USOBT_C** *provides mapping of authorization objects relevant for corresponding tcode or Fiori specific hash code.*

Controls approach

S/4HANA capabilities and control drivers

The global solution provides many opportunities but also presents controls challenges that need to be addressed

Appendix Ledgers

Integration of Finance (FI) and Controlling (CO) still allows flexibility with appendix ledgers (ex., manual G/L postings in appendix ledger while base ledger is closed to postings)

Real-time Close

Reduction in batch close processes, processes designed for real-time operations, and availability of reporting on demand

Universal Journal

A true single source of truth for all accounting components – no more reconciliation

Central Finance

Pre-built SLT libraries and data transformation capabilities enable rapid deployment of SFIN as a central financial platform

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Business process control impact overview

- S/4HANA introduces new functionality which was previously not available in older versions. Along with the new functionality, there are changes in the existing functionality as well.

- These changes require review of business process controls, broadly classified in two areas:

New Functionality	Changed Functionality
Example: Traditional controls focused on maintenance of bank master. "Bank master data maintenance is accurate, complete, and performed in a timely manner." In S/4HANA, bank account workflows can be used for opening, closing, sensitive attribute change, etc., for enhanced control. New control objective in this scenario would be "SAP is configured with a workflow that requires opening, closing, sensitive data field changes in bank accounts to be approved prior to being effective."	**Example:** Tradition control for reviewing cash position referenced old t-codes : "The liquidity forecast report (transaction FF7B) is generated and reviewed on a daily basis to check the cash position" In S/4HANA, this functionality has moved to Fiori application. Old transactions like FF7B do not work in SFIN. New control objective in this scenario would be "The liquidity forecast report (via Fiori application Cash Position) is generated and reviewed on a daily basis to check the cash position"

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S/4HANA control impact example

Universal Journal

Universal Journal

A true single source of truth for all accounting components — no more reconciliation; simple and holistic data model allows for flexible reporting and dynamic hierarchies pulling from line item detail in real-time

Control Impact

- SAP has introduced a new table named 'ACDOCA' for the Universal Journal. It allows bringing data from General Ledger, Asset Accounting, Material Ledger, Controlling (Including coding block & CO-PA) into one journal.

- As a result, the traditional control requirement for reconciliations between sub-ledgers and general ledgers is no longer needed.

- Example of new control description:

SAP S/4 Hana automatically posts data from General Ledger, Asset Accounting, Material Ledger and Controlling into a universal journal (table ACDOCA), which eliminates the need for reconciliation of these accounts.

- Additionally, table ACDOCA (universal journal) replaced all the aggregate and index tables such as FAGLFLEXA – General Ledger Line Item table.

S/4HANA control impact example

Appendix Ledgers

Appendix Ledgers
Integration of FI and CO still allows flexibility with appendix ledgers (ex, manual GIL postings in appendix (ledger while base ledger is closed to postings); no reconciliation required

Control Impact
- SAP has overcome the need of reconciliation (FI & CO), and the need of settlement (All cost elements, including secondary cost elements are G/L accounts.

- As a result, the traditional control requirement for FI&CO reconciliation and cost element settlement is no longer needed.

- Example of new control description:

SAP S/4 Hana automatically posts data from General Ledger, Asset Accounting, Material Ledger and Controlling into a universal journal (table ACDOCA), which eliminates the need for reconciliation of these accounts.

S/4HANA control impact example

Real-time Close

Real-time Close
Reduction in batch close processes, processes designed for real-time operations, and availability of reporting on demand enables transition to a continuous (soft) close

Control Impact

- The functionality of the standard closing cockpit is not available in S/4HANA. Transaction codes CLOCO, CLOCOC, CLOCOS and CLOCOT are eliminated.

- As a result, the traditional control requirements for closing activities checklist and monitoring can be removed.

  – SAP S/4 Hana is configured to automatically post the approved write-off amount to bad debt expense and hence systematically closing the invoice within the system.

  – SAP S/4 Hana is configured to automatically update the fixed asset plan values in real-time with every master data change and every asset transaction.

S/4HANA control impact example

Central Finance

Central Finance
Pre-built SLT libraries and data transformation capabilities enable rapid deployment of SFIN as a central financial platform

Control Impact

- (BP) is now capable of centrally managing master data for business partners, customers, and vendors. BP is the single point of entry to create, edit, and display master data for business partners, customers, and vendors.

- The (mandatory) target approach in SAP S/4HANA is the Business Partner approach (Customer-Vendor Integration [CVI]).

- Traditional controls put focus on the validation of customer and vendor master data. In comparison, new controls need to be developed to perform the necessary CVI Business Partner transformation customizing settings and checks.

Key takeaways

Key takeaways

Here are a few of our lessons learned

Project Insights

- Understanding the current design is a key foundation to building a new one.
- Keep up with the latest upgrades to maximize the use of the new technologies.
- Establishing governance early for GRC is critical to solidifying key global design requirements.

Key Impacts

- Increase the use of S/4 HANA, GRC, and Fiori to streamline the new platform.
- Continue to address complexities with a combination of new technologies and creative processes.
- Review GRC capabilities to drive business value as part of the implementation.

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Q&A

For questions after this session, contact us at
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