

S/4 On Our Own in 3 months Upgrade vs re - implementation

Muru Ramamoorthy, IT Solutions Architect, L.B. Foster Chris Ritterhern, Principal Enterprise Architect, Protera Session ID #: 82427



About the Speakers

Muru Ramamoorthy

- IT Solutions Architect, L.B. Foster
- 4+ years with L.B. Foster at our Headquarters in Pittsburgh, PA
- Serves as the responsible for overall development, interfaces, UX Design (Fiori/Personas), Master Data Governance

Chris Ritterhern

- Principal Enterprise Architect
- 25+ years experience from Technical to all application layers
- Certified Scuba Diver





Key Outcomes/Objectives

- 1. S/4 can be a conversion vs green-field
- 2. Stay focused on the business process end-toend ownership
- 3. You know best...
 - a. corollary: Sometimes crazy ideas are ok





Agenda

- L.B. Foster Brief Portrait
- Our Compelling Event This Big Picture
- Key Project Concepts
- The Team
- What we really did, our toolset(s)
- You can too...



L.B. Foster – Brief Portrait

- L.B. Foster provides rail, construction, and energy markets with innovative solutions to build and maintain their critical infrastructure and landmark projects.
- Headquartered in Pittsburgh, PA.
- Several locations across the US as well as Canada, UK and Germany.
- Products and services include rail segments, rail insulator joints, trackside lubricators, concrete rail ties, precast concrete buildings, pipe coating/threading, bridge decking and oil field tubular/equipment inspection just to name a few!

















Our Compelling Event – This Big Picture

- L.B. Foster's initial SAP implementation (ECC 6 w/ EHP7 and Simple Finance 1509 on HANA) went live April 2016 but included only part of overall business.
- Changes to management, business strategy delayed additional roll outs.
- Executive decision to jump start SAP roll out in summer of 2018.
- Question Do we upgrade to full S/4 HANA now or onboard additional businesses which will complicate our conversion later?





Key Project Concepts

- Where do we start?
 - This is where we looked at the rehearsal concept & a fast conversion as a proof point.
- Rehearsal concept good, ok what about all the other stuff
- Are we really going to change hosting providers?
- Who's going to help?
- So you say we have to upgrade OpenText..., Sure, let's move Vertex to the cloud...
- Our Analytics Strategy, BOBJ-Webi ongoing move to SAP Analytics Cloud
- Mill Products additional functionality for our initial roll out, why not!
- Cut-over, dual-maintenance, run-in, de-commissioning.....





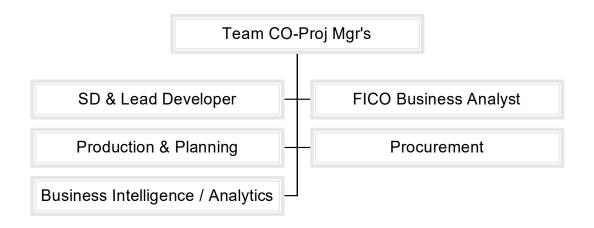
Key Project Concepts – Business Process

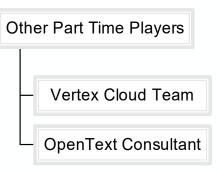
- Business Processes
 - Order to Cash
 - New Credit Management (FSCM)
 - Sales owned the Vertex to cloud move with technical assistance
 - Procure to Pay
 - Invoice clearing OpenText
 - AP oversaw the OpenText upgrade
 - Build to Ship
 - Oh right, we use SAP Variant Configuration...
 - Mill Products
 - Journal to Close
 - Accounting owning the bank feed process
 - Master Data
 - The whole concept of Business Partner vs Customer-Vendor





The L.B. Foster – Business & IT Team









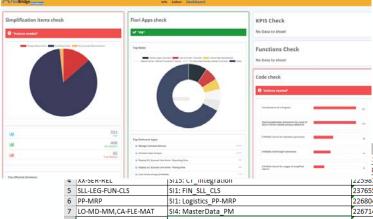
The L.B. Foster – Business & IT Team





Initial Steps – Simplification Items

We initially used a tool from Protera called FlexBridge



This initially helped us to quickly see the big picture...

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4 AA-SEK-KEL	SIID: CI INTEGRATION		_	8 http://launchpad.support.sap.com/#/notes/2259818	Yes	Muru		Medium		1			
5 SLL-LEG-FUN-CLS	SI1: FIN SLL CLS			6 http://launchpad.support.sap.com/#/notes/2376556	Yes	Solomon	Materials - Not relevant in			1			
6 PP-MRP	SI1: Logistics PP-MRP		226804		Yes	Dan / Solomon	Subcontracting	Medium		1			
7 LO-MD-MM,CA-FLE-	MAT SI4: MasterData PM		226714	0 http://launchpad.support.sap.com/#/notes/2267140	Yes	Muru	Mat 18 to 40	Medium		1			
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9 PP-MRP,PP-MP-LTP	SI12: Logistics PP		226808	8 http://launchpad.support.sap.com/#/notes/2268088	Yes	Solomon	MRP Live	Medium		1			
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13 SD-BF-PR,SD-MD-CN	1 SI2: SD_PRIC		226730	8 http://launchpad.support.sap.com/#/notes/2267308	Yes	Robyn/Muru	KONV Prici Dan/ Shwan /	Solomon		L			1
14 PS-CON	SI17 Logistics_PS		226733	http://launchpad.support.sap.com/#/notes/2267331	No		Project sys Eric			1		2	3
15 PS	SI18 Logistics_PS		226733	3 http://launchpad.support.sap.com/#/notes/2267333	No		Project sys Eric /Solomon	1		1	2		3
16 SD-BIL-RB	SI6: SD_REBATES		226734	4 http://launchpad.support.sap.com/#/notes/2267344	No		Trade Pror Jon			4	5	2	11
17 SD-BIL	SI14: SD_BILLING_OM		226737	'6 http://launchpad.support.sap.com/#/notes/2267376	Yes	Eric	Output Cor Jon/Muru			1			1
18 SD-BIL-RB	SI15: SD_Rebate_All		226737	7 http://launchpad.support.sap.com/#/notes/2267377	Yes	Eric	Rebate - no Muru			1 2	2	3	2 10
19 SD-SLS-GF,SD-BIL,SE	-MD-CM SI16: SD_Miscellaneous mi	nor deprecations in SD Area	226739	http://launchpad.support.sap.com/#/notes/2267395	Yes	Muru	BAPI chang Muru/Saroja			2	2		4
20 MM-PUR-GF-LIS	SI3: PROC_LIS		226741	4 http://launchpad.support.sap.com/#/notes/2267414	No		Vendor eva Robyn/Muru					2	2
21 SD-BF-PR,SD-MD-CN	SI8: PROC_MM_PRICING		226744	http://launchpad.support.sap.com/#/notes/2267442	Yes	Eric	Pricing Pro Saroia			1	1		2
22 LO-VC	SI13: Logistics - PLM		226787	3 http://launchpad.support.sap.com/#/notes/2267873	Yes	Dan/ Shwan / Solo	om VC Materia Solomon			_	2	3	1 6
23 PM-IS	SI1: Logistics_PM		226746	http://launchpad.support.sap.com/#/notes/2267463	No		LIS (blank)			1	_	-	1
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S/4 Pre & Post Conversion Steps

2267308 - S4TWL - Data Model Changes in SD Pricing

Symptom

You are doing a system conversion to SAP S/4HANA. In this scenario, the following SAP S/4HANA Transition Worklist item applies.

Solution

Business Value

Data model simplifications Sales and Distribution(SD) pricing offer the following benefits:

- Since it is no longer a cluster table, the pricing result can now be directly accessed for analytical purposes.
- Enhanced field lengths for several fields allow for more flexibility in pricing and condition technique.
 - Customer and document pricing procedure extensions allow for more flexible pricing procedure determination.
 - The number of possible customer condition tables for pricing has been roughly doubled.
 - The number of possible accesses in an access sequence has been enhanced from 99 to 999.
 - The key of condition tables ('A-Tables') can now be 255 characters long (previously 100).
- · The removal of redundant fields from condition header table:
 - · reduces the memory footprint of condition records
 - prevents additional conversions and, therefore, downtime if field lengths from pricing field catalogue entries need extension

Description

 Business documents within the SAP Business Suite, such as the sales order and the purchase order, are used to store the pricing result in database table KONV. In SAP S/4HANA, table KONV has been replaced in its data persistency role by the new table PRCD_ELEMENTS. However, KONV is and can still be used for data declaration purposes. It still defines the structure of the pricing result within the This is no minor statement, this can percolate all the way to revenue & analytic reports, not to mention user-exits, etc...





S/4 Pre & Post Conversion Steps

mplification item List - SAP S/4HANA 170	9 [03 (10/2018)]					
A T Q U V I I	± ∨ ■ © Check Consistency for All © Check C	Consistency Details Display Consistency Check Log SApp	ly:Revoke Exemption Dis	olay Exemption Log		
Application Area	ID .	Title	Component	Catetory	Relevance	Status
Master Data	S12 MasterData	S4TWL - MDM 3.0 integration	LO-MD-MM	Functionality unavailable (equivalent exists)	0	Release
Master Data	S13. MasterData	S4TWL - SRM Product Master	AP-MD-PRO	Functionality unavailable (equivalent exists)	0	Released
Master Data	S14 MasterData	S4TWL - Logistics Batch Management	LO-BM-MD	Functionality unavailable (equivalent exists)	0	Released
Industry Oil	SIO1 ACM Functional Equivalent Available	S4TWL- ACM - Simplification for Contract Approval	LO-AGR	Functionality unavailable (equivalent exists)	0	Released
SAP Ariba	SID1: ARIBA_CLOUD_INTEG	S4TWL - Ariba Cloud Integration	BNS-ARI-TRF	Change of existing functionality	0	Releaser
Cross Topics	SID1: AS_ABAP_NON_SIMPLE	ABAPTWL - No support for non simplified system flavour	BC-ABA-LA	Change of existing functionality	0	Release
Commodity Management	SID1: CM_CPE_MARKET_DATA	S4TWL - CM: Simplified Market Data	SD-BF-CPE,MM-PUR-GF-C	Functionality unavailable (equivalent exists)	0	Released
Commercial Project Management	SID1: CPM_RATE_CARD	S4TWL - CPM - Rate Card	CA-CPD	Functionality unavailable (equivalent exists)	0	Release
Enterprise Controlling	SIO1: EC. CS. MATNR	S4TWL - Usage of long Material Number in EC-CS	EC-CS	Change of existing functionality	0	Released
Logistics - Management of Change	Si01: Logistics_MOC - Simplifications in MOC	S4TWL - Simplifications in Management of Change	CA-IAM-MOC	Change of existing functionality	0	Released
Industry Media	SIO1: MEDIA	S4TWL - SAP Media availability in SAP S/4HANA	IS-M	Functionality unavailable (no equivalent)	0	Released
Industry Oil - OGSD	SID1: OGSD_OLD_DATACOLL	S4TWL - OGSD - Classic Data Collation	IS-OIL-DS-OGSD	Functionality unavailable (equivalent exists)	(9)	Released
industry Oil - OTAS	SIG1 OTAS DISPATCH	S4TWL - OTAS - Integrated Dispatch Managment	LO-BSLM	Functionality unavailable (equivalent on roadmap)	8	Releases
Transportation Manangement	SID1: TM_CUSTOM/ZING	S4TWL - Simplified customizing of Transportation Manangemen	TM-FRS,TM-FRS-IP,TM-FR	Change of existing functionality	0	Released
Industry Oil	SIG2: ACM_functionality_not_available.	S4TWL- ACM: Simplification for Pre-payment and External Interf	LO-AGR	Functionality unavailable (no equivalent)	0	Released
Cross Topics	SIDZ AS ABAP_CLEANUP	ABAPTWL - Cleanup of orphaned objects	8C	Functionality unavailable (no equivalent)	(2)	Released
Commodity Management	SIG2 CM CPE ACTIVATION	S4TWL - CM: Simplified CPE Activation	LO-CMM-BF,MM-PUR-GF-	Change of existing functionality	0	Released
Commercial Project Management	SID2: CPM_C4C_INTERFACE	S4TWL - Interface of SAP CPM with SAP Cloud for Customer	CA-CPD	Functionality unavailable (no equivalent)	0	Release
Industry Media	SIG2 MEDIA PRODUCT MASTER	S4TWL - Media Product Master	CA-MOG	Functionality unavailable (equivalent exists)	0	Release
Industry Oil - OGSD	SIG2 OGSD OLD INTERFACES	S4TWL - OGSD - Classic OGSD Interfaces	IS-08-0S-0GSD	Functionality unavailable (equivalent exists)	0	Released
Industry Oil - OTAS	SIG2 OTAS PETROLEUM	S4TWL - OTAS - Integrated Petroleum Report	LO-BSLM	Functionality unavailable (no equivalent)	0	Released
Transportation Manangement	SIG2 TM_CUSTOMZING_2	S4TWL - Forwarding Settlement Document Transfer in TM	TM-FWS-BIL,TM-FWS	Change of existing functionality	0	Released
Industry O8	Sign ACM function availability in future roadm	S4TWL - ACM: Simplification of Cross Topics	LO-AG			-
Cross Topics	SIGN AS ABAP_SSCR	ABAPTWL - SSCR license key procedure is no longer supported	BC-AB/	Conversi	on o	f Ar
Commodity Management	SIGS CM CPE FA/FE	S4TWL - CM: CPE Simplified Formula Assembly & Formula Eval	LO-CM	001110101		

NLTM-FWS	Change of existing functionality	⊗ Released
•	Co	nversion of Accounting to SAP S/4HANA
	• 63	Info: SAP S/4HANA Customizing and Data Migration
	•	Preparations and Migration of Customizing
	• 63	Check Customizing Settings Prior to Migration
	• 🗟	Set Number of Jobs for Activities in Mass Data Framework
	•	Preparations and Migration of Customizing for General Ledger
	•	Preparations and Migration of Customizing for Accrual Engine
	•	Preparations and Migration of Customizing for Asset Accounting
	•	Preparations and Migration of Customizing for Controlling
	•	Preparations and Migration of Customizing for Material Ledger
	•	Preparations for Migration of House Bank Accounts
	•	Preparations for Migration of Financial Documents to Trade Finance
	•	Preparatory Activities and Migration of Customizing for Credit Management





Customer – Vendor Master Conversion to Business Partner



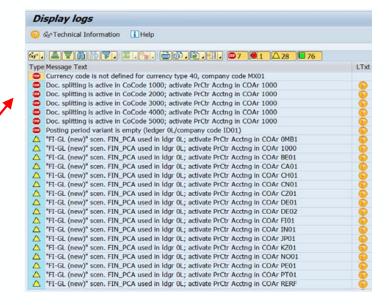






S/4 Pre & Post Conversion Steps

Structur	0
- 68	SAP Customizing Implementation Guide
	Commercial Project Management
•	OpenText Archiving and Document Access for SAP Solutions
•	OpenText Business Suite for SAP Solutions
, _	OpenText Extended ECM for SAP Solutions
. 199	Activate Business Functions
•	Conversion of Accounting to SAP S/4HANA
	Info: SAP S/4HANA Customizing and Data Migration
•	Preparations and Migration of Customizing
•	Data Migration
	 Partitioning of Universal Journal Entry Line Items Table
	• 🕞 🕪 Regenerate CDS Views and Field Mapping
	• 🗟 🤪 Analyze Transactional Data
	• 🗟 🤛 Display Status of Analysis of Transactional Data
	 Documentation of Data Migration
	· 🗟 🤛 Start and Monitor Data Migration
	· 🕞 🕪 Migrate General Ledger Allocations
	· 🗟 🖟 Migrate House Banks Accounts
	 Migration of Financial Documents to Trade Finance
	Credit Management Migration
	▼ Complete Migration
	Reconcile and Compare Migrated Data
	· Set Migration to Completed
	Complete Migration of Financial Documents to Trade Finance
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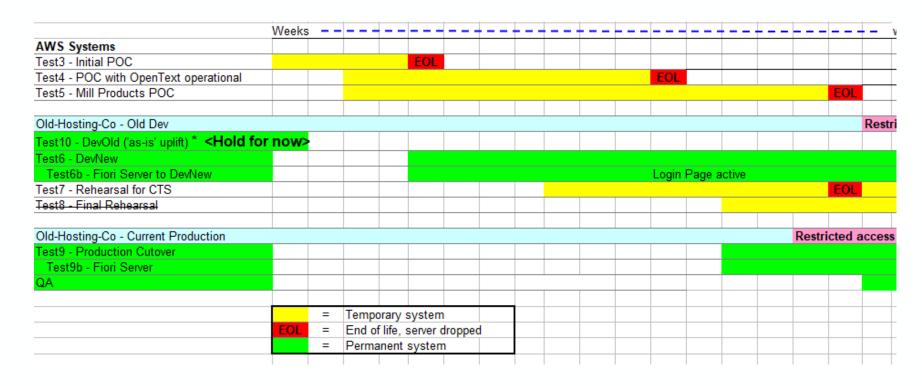
See...Think... Situationally Revise...

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8	9	10	11	12	13	14		5	6	7	8	9	10	11	3	4	5	6	7	8	9		7	8	9	10	11	12	13	4	5	6	7	8	9	1
15	16	17	18	19	20	21		12	13	14	15	16	17	18	1	0 11	12	13	14	15	16		14	15	16	17	18	19	20	11	12	13	14	15	16	1
22	23	24	25	26	27	28		19	20	21	22	23	24	25	1	7 18	19	20	21	22	23		21	22	23	24	25	26	27	18	19	20	21	22	23	2
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Ok Where did we put that server....



Simple visualization tools





A More Technical View

Pr	e-	Techi	nical -	Post-						
Conv	ersion	Conv	ersion	Conversion						
Day 1	Day 2	Day 3	Day 4	Day 5	Day 6					



A View to a Cut-Over....

Cut-Over Production	on System Steps by	Dav									
Start date: Day Zer											
· ·	Friday	Saturday	Sunday	londay – EOD likel		Wednesday	Thursday	Friday	Sat	Sun	Monday
Protera Tech Team			conversion period		LBF Biz Team	LBF Biz Team	LBF Biz Team	LBF Biz Team			LBF Biz Team
Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11
Copy of Production made system available at 7pm EST	System available to LBF Team 8am EST	S/4 Software Update N	lanagement 'Gen Step'	System back for post conversion (estimated 8m EST)	Transport 3 – New company code or business segment updates	Set Client 100 in AWS to 'Production' mode. 'Now active'	Troubleshootting various bsuiness process issues All Day	Change Old Production System Message to 'Now restricted to accounting access			Go-live System open to all LBF users
System copied to AWS	Transport 1 - Pre- Config settings		LiveCache install starts	Vertex old - disabled	(Vertex team)	9am Re-run Bank feeds starting from 2/1/19 to current Jon to do actual execution Note: completed 10am EST		Late Afternoon: Accounting to release system for limited user community			System access open to all Old Production access now restricted
All pre-conversion / upgrade notes applied	Business Partner & other conversion pre- work	estimated	48 hours	OpenText final conversion to start (estimated 8-16 hours) (assigned to Satya)	GL Balance loading Teja	1pm start Alpha–Beta Team Business Process run thru in Client 100		Soft Opening to limited user community			
OpenText - stop CloudEndure	System available for Gen step possible 12pm EST availability. (actual 2pm EST)		System turn over actual 9am EST	Transport 2 - Post configuration settings	Alpha Team Business Process run thru test in Client 200	Checkpoint: Alpha- Beta team sign-off					
Century Link ECC Production system back online (8pm EST) Note: no change to security roles, system message to be applied			Vertex & OpenText will be initiated	Proceed with final Post migration steps		MRP Checkpoint run- thru daily job to be released PPD run to be initiated					





What we really did, our toolset(s)

- Because of the ease of the cloud provider environment we went with a rehearsal concept
 - This allowed fast image retrieval in case of screw-ups, like 'marking the system as 'Data Migration Complete'
- We started with a tool 'FlexBridge' from Protera that allows us to quickly see all the relevant what SAP calls 'Simplification Notes'
- We used SAP CALS for some initial learning of S/4 & Fiori
- We worked in a close proximity team environment, eyeball-to-eyeball mode...

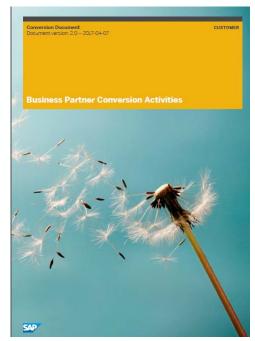


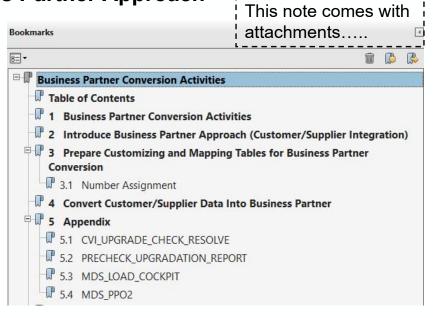
Here's A Couple Examples....

2352383 - S4TWL - Conversion to S/4HANA Material Ledger and Actual Costing



2265093 - S4TWL - Business Partner Approach









List of Rehearsal System's

Our Rehearsal Systems & Sequencing	Purpose/Comment
Test3 - Initial POC	
Test4 - POC with OpenText operational	
Test5 - Mill Products POC	
Test6 - DevNew	re-snapshot of Production vs old dev
Test7 - Rehearsal for CTS	
Test8 - Final Rehearsal	was not ultimately used
Test9 - Production Cutover	
Test10 - DevOld ('as-is' uplift) *	on hold for now, may not be needed





You Can Too...

- We really DROVE ahead and knew change management would be an issue.
- Latent users who had key screens or reports and how these were handled.
- Some performance issues but nothing major.
- S/4 is still new and evolving, so don't be surprised by surprises.
- Fiori UI is a treasure trove and great for ongoing user SAP productivity improvements.







LB Foster - Live on S/4 Hana on AWS managed by Protera -Thank You.

Well it's finally here LB Foster is live today the final users came online after a 'soft' opening last Friday.

Overall there about 200 users across 3 time zones & 4 plants/offices, as of this writing we are seeing successful order to shipping sequences, purchasing and approval cycles, MRP using Mill Products and key journal entries being made by Accounting.



Utilizing FlexBridge was initially FlexBridge key in helping the LB Foster team first access the scope of the effort and in one place allow their

business analyst team to interact with the various elements therein.

Their initial analysis of that allowed Protera to quickly created a S/4 Prototype based off their actually production system. Protera then delivered the S/4 converted prototype system on October 15, 2018 and away the project went..... along the way other notable elements were added to this go live:



Moved entire SAP data center from being hosted by CenturyLink to AWS, this included the following systems:

- SAP ECC moved & upgraded to SAP S/4 Hana.
- Business Objects moved and simplified from two to one server (one for Dev. one for Production).
- Re-Integrated SAP Analytics Cloud.
- Disabling Vertex tax interface and re-integrating the latest Vertex tax/cloud based offering vs on-prem server
- Move OpenText & upgraded to S/4 capabilities (one for Dev, one for Production).
- Spun off a Mill Products Prototype system which has come to fruition and is now part of the production process, this also necessitated installation of SAP's LiveCache functionality.
- Fiori Servers were established are in use on Dev & Production.

Multiple Protera colleagues were involved but many thanks early on to Alexi, Patrick then Pete, Jagadeesh & their teams.

A key aspect to the success of this business system migration & conversion effort is that LB Foster did all this with their own existing team and did not have to hire or ramp up a large consulting team. This was made entirely possible by the fact that Protera provided a key business functional resource to give guidance as they moved thru the various business processes.

A second key aspect is the Protera recommended Rehearsal strategy which was a capability provided as a direct result of being in AWS. This allowed the LBF team to quickly spin up a copy of the production snapshot, rehearse the SAP Pre-technical-post S/4 conversion steps and then hone the acumen and address business issues resulting as they proceeded.



Again many thanks to all who were involved, a very nice success story for Protera with LB Foster.



Thank You Team



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Presentation Materials

Access the slides from 2019 ASUG Annual Conference here:

http://info.asug.com/2019-ac-slides





Q&A

For questions after this session, contact us at

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Backup / Temp Slides



