
UNIVERSITY OF THE
WITWATERSRAND,
JOHANNESBURG



SIERRA & ORACLE INTEGRATION

IUGSA 2019
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AGENDA

AGENDA:

- Project Background
- Library Needs
- Integration Benefits
- Systems Information Breakdown
- Preparation for Integration
- Data Received from Sierra
- Data Validation
- Demonstration
- Reports
- Challenges

ABOUT WITS LIBRARIES

- 11 libraries from 3 campuses
 - Parktown Campus (Educ, Health & Management)
 - West Campus (Comm, Eng & Law)
 - East Campus (WWL, Archit, Biophy, WCL & Geomaths)

OUR TEAM

- ▶ Library Computer Services (LCS)
- ▶ 9 Staff Members
 - Manager – Library Systems & Digital Initiatives
 - Deputy Manager – LCS
 - Web Developer
 - 3 Senior Network Operations Officers
 - Help Desk and Content Management
 - Library System Technical Support
 - Systems Co-ordinator

PROJECT BACKGROUND

- WITS required an automated, integrated procurement workflow process between the Library Management System (Sierra) and Oracle procurement systems to control and facilitate spending on library resources.

LIBRARY NEEDS

- Orders needs to be created on Sierra
- Secure web service for file transfer from Sierra to Oracle
- Incomplete requisition is created on Oracle
- Requisition Import calls the PO Requisition Approval workflow to submit the requisitions to the approval process
- Oracle to auto create purchase order
- Finance Department to pay the service provider
- Oracle push to the payment information back to Sierra
- Sierra to be updated with the correct actual amounts

BENEFITS

- Automated process between Sierra and Oracle payments system
- Quicker payments of invoices
- Monitoring of payments from one system to another
- Clear audit trail
- Minimizing risks of double payment of invoices
- Clear reconciliation between Sierra and Oracle

CURRENT WORKFLOWS

LIBRARY PROCESS

- Process begins when Academics need information resources
- Libraries captures an order on Sierra and is sent to acquisitions
- The acquisition librarian than verifies the order and bibliographic record on Sierra and is sent to suppliers
- The supplier (bookseller) send an order confirmation
- At some point in time, the delivery of the ordered information resources are delivered with the invoice
- Process ends with the allocated invoice dropped off at Library Finance

FINANCE PROCESS

- This process starts when printed, signed and stamped invoices are delivered for processing
- The library finance accountant verifies correctness and completeness of invoice
- The library finance accountant generates a requisition on ORACLE
- The library finance manager then approves the requisition
- Once approved, the requisition flows to the procurement department where it gets checked
- Procurement generates a purchase order on ORACLE
- The library finance accountant receipts the order
- (The library finance accountant sends the original invoice with copy of purchase, receipt and delivery note
- Central finance does their processing
- At some point the actual payment to the supplier is made
- The process ends with the payment fulfilled.

PREPARING UP THE INTEGRATION

- Contacted Wits ICT
 - Process mappings (As is & To be)
 - Assigned Project Manager & Resources
- Generated an API keys for our Developers
 - Send box (Documentation)
 - Wits server
- Purchased API success services – for consultation/development assistance (40 Hours)
- Vendor Clean up on Sierra
 - ✓ Compared Oracle vendors with Sierra Vendors
- Added variable-length fields (OVN, Inv. No) on the order records
 - ✓ specify its field group tag, a long name/label and a short name/label

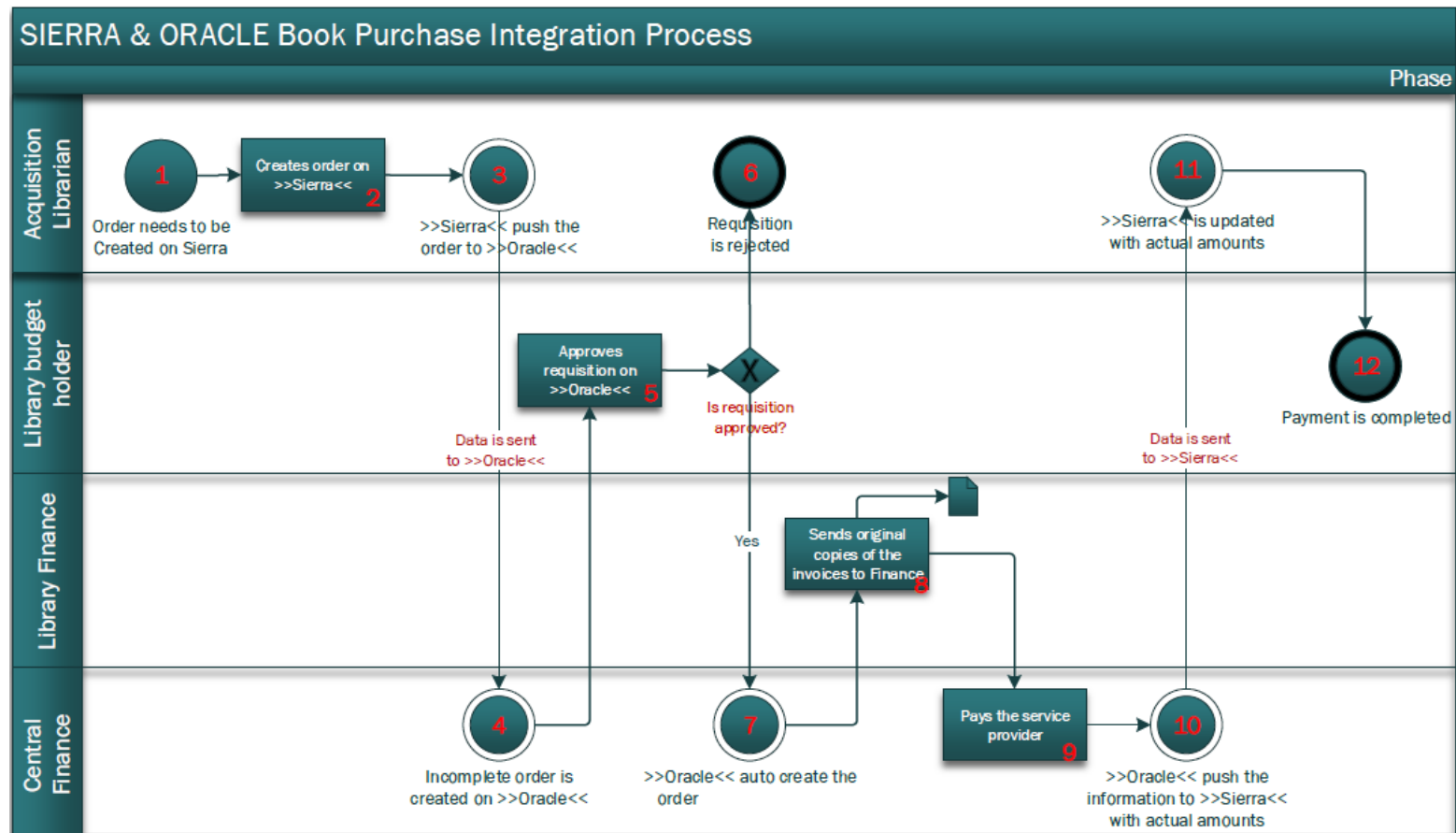
SYSTEM INFORMATION BREAKDOWN

System Name	Current Version	Operating Environment	Database Technology	Vendor
Sierra	Version 4.3.0_11	Redhat Linux, java base app	SQL	Innovative interface
Oracle	Release 12.1.3	Oracle Solaris 64 bit (Unix)	PL/SQL	Oracle

SOLUTION

- Project was developed in-house
- Technology used - PL/SQL and XML for reports
- REST API's Identified to use:
 - /v5/bibs
 - /v5/funds
 - /v5/orders

SOLUTION



DATA RECEIVED FROM SIERRA

- Data to be received from Web Service and validated before the requisition interface table is populated
- To integrate invoices exactly as they are captured on Sierra
- Only data which has passed validation should populate the interface table
- File generation must be triggered from Sierra when transaction has been captured.

DATA VALIDATION

- Fields for Validation
 - Oracle Vendor Number
 - Invoice Number
 - Receipt Date
 - Price
- Orders which fail validation should reflect in the exception report sent via email to the Librarians in Sierra

DEMONSTRATION

- To start the process, the requester:

- Open Sierra Order Record
- Insert Oracle Vendor Number
- Insert Invoice Number
- The Price
- The RDate

Sierra Process

Bib Record - b17873320

FileEditViewGoToolsHelp

InsertSaveViewEditSummaryExportVendorPrintClose

b17873320

AUTHORObama, Michelle, 1964- author.
TITLEBecoming / Michelle Obama.
SHELF NOE 909 OBA OBA
LOCATIONS c , e

Summary

Recordo11505953

Selection ...o11505953

Paymentso11505953

Bib-Level Holds0

Record

o11505953

Last Updated: 06-11-2019

Created: 12-07-2019

Revisions: 5

ACQ TYPE

p PURCHASE

E PRICE

R346.96

LOCATION

aa Main Library

FORM

b BOOK

CDATE

06-11-2019

FUND

zmgb1 4641103.5121501

CLAIM

- BLANK

ODATE

12-07-2019

COPIES

1

ORD NOTE

- BLANK

RENEWAL

- NO CODE

ORD TYPE

f FIRM ORDER

CATEGORY

b BOOKS

RACTION

- BLANK

SAPSE

v 22SOCIAL SCIEN

RDATE

06-11-2019

CODE4

- NOT APPLICABLE

RLOC

a ACQUISITIONS

BLOC

a ACQUISITIONS

STATUS

o ON ORDER

TLOC

p PO REQUESTED

VENDOR

pentz I.H. Pentz

LANG

eng English

COUNTRY

VOLUMES

1

NOTE

CONF

INT. NOTE

HSE MAIN

Oracle vendor number

4872

VEN. NOTE

9780241334140

Invoice Number

5999

ISBN PICK

1bOrder sent 15-07-2019 8:50

Queue P.O.

View Finances

o11505953

Edit Mode (OVR)

By saving on Sierra, the interface with Oracle takes place overnight

This created the Get Sierra Report

&

Update Sierra Report

Wits Get Sierra Orders 051119.xlsx

This report shows orders receipted on that day

Wits Update Sierra Orders 051119.xlsx

This report shows errors from the requisition import process

REQUISITION HEADER



EBSSYS

Navigator Favorites Shopping Cart Home Logout Help Preferences Personalize Page Diagnostics

Shop Requisitions Receiving Assessments

Requisitions Notifications Approvals

Requisitions: Requisitions >

Select Object: Copy To Cart Cancel Requisition Change

Select	Requisition	Description	Total	Quantity	Qty Delivered	Qty Cancelled	Open Quantity	Creation Date
☐	4608595	M2696754 - DAWSON BOOKS	22467.33 ZAR	11	0	0	11	08-Oct-2019 15:16
☐	4608594	5833 - I H PENTZ BOOKSELLER	991.32 ZAR	4	0	0	4	08-Oct-2019 15:16
☐	4608593	5970 - I H PENTZ BOOKSELLER	4438.18 ZAR	7	0	0	7	08-Oct-2019 15:15
☐	4608592	M2696754 - DAWSON BOOKS	22467.33 ZAR	11	0	0	11	08-Oct-2019 13:45
☐	4608591	5970 - I H PENTZ BOOKSELLER	4438.18 ZAR	7	0	0	7	08-Oct-2019 13:45

On description the invoice number and supplier name appears as per Sierra data and when clicking on description, it gives you the details of that particular invoice with all the lines that are receipted on Sierra in that invoice

REQUISITION EXAMPLE

EDS515

Procurement

Navigator

Favorites

Shopping Cart Home Logout Help Preferences Personalize Page

Shop

Requisitions

Receiving

Requisitions | Notifications | Approvals

Requisitions: Requisitions > Requisitions Search >

Requisition 4608594

Copy To Cart

Personalize Stack Layout: (HeaderColumnStackRN)

Personalize Table Layout: (ReqHeaderTableRN)

Description

Created By

Creation Date

Deliver-To

Recoverable Tax

Non Recoverable Tax

Estimated Tax

Approval Amount

Justification

5833 - I H PENTZ BOOKSELLER

08-Oct-2019 15:16:12

Education Campus - Parktown Private Bag 3 WILs
Johannesburg,2050

0.00

148.70

148.70

1140.02

I H PENTZ BOOKSELLERS: Information Resources
(Acquisitions).

Status

Change History

Urgent Requisition

Attachment

Note to Buyer

Approved

No

No

View

hse/educ (Sandham, Alison - print copy please) -

Personalize "Details"

Details

Personalize Table: (LinesTableRN)

Line	Description	Need-By	Deliver-To	Unit	Quantity	Qty Delivered	Qty Cancelled	Open Quantity	Price	Amount (ZAR)	Details	Order
1	o1148843-Odyssey of an African opera singer	11-Oct-2019 12:00:00	Education Campus - Parktown	Each	1	1	0	0	217.4 ZAR	217.40		3591102
2	o1148844-History's schools : past struggles and present realities	11-Oct-2019 12:00:00	Education Campus - Parktown	Each	2	2	0	0	282.61 ZAR	565.22		3591102
3	o1148865-The tortoise cried its only tear	11-Oct-2019 12:00:00	Education Campus - Parktown	Each	1	1	0	0	208.7 ZAR	208.70		3591102
Total										991.32		

Return

Copy To Cart

Shop Requisitions Receiving Shopping Cart Home Logout Help Preferences Personalize Page

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SIERRA / ORACLE RECONSOLIDATION & EXCEPTION REPORTS

- TWO TYPES OF REPORTS WILL FORM PART OF THE OUTPUT FROM THE INTERFACE :
- *These report are sent via email to the Acquisitions & Systems Librarians in Sierra.*

- **RECONCILIATION REPORT:**

Report shows the processed requisition final payment as per invoice as per PO number.

- **REQUISITION IMPORT EXCEPTIONS REPORT-**

Report shows errors from the Requisition Import process.

[Wits Sierra Order Tracking Summary Report.xlsx](#)

CHALLENGES

- Sierra is a closed system
- REST API Development
 - No API to push payment information back from Oracle to Sierra
 - There is no way to retrieve a list of the vendor from the REST API right now – we need to retrieve the vendor information from Sierra to pass to Oracle
- Sierra has no Dev instance – live data when testing

EXCEPTIONS

- Some order numbers from Sierra needs to be re-imported to Oracle
 - The Rdate to be updated when the complete invoice items are completed on that date
- Pre-Payments
 - Will be processed using the suspense account in the current year.



QUESTIONS?
COMMENTS?

