SAPinsider

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Managing the Complexity of Bank Connectivity for SAP S/4 HANA

Steven Otwell — December 2, 2021

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SAPINSIDER COMMUNITY
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Steven Otwell

Steven Otwell is Director of Payments and Connectivity with Kyriba. He has 15+ years in bank connectivity, payment hubs, SWIFT and payment fraud

What We'll Cover

Complexities of Global Banking

- SWIFT
- Standardization (or lack there of)

Payment Hubs

- What is a payment hub
- Value of a payment hub

Business Case

- Are you a candidate for a payment hub?
- What is the ROI?

Topic 1

Complexities of Global Banking

Why is connectivity a problem?

91% of CIOs and VP IT responded that bank integrations was one of the most complex aspects of their ERP project – Pulse Survey 2020

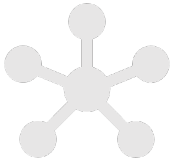
- There is little standardization among not only from bank to bank but from branch to branch. Every bank and every regions has their own specific file structure that needs to be developed and tested.
- Business users need the flexibility to manage new banking relationships and not subjected to IT bottleneck
- Payment Fraud is now a major concern at the C-Level.
- New compliance standards from SWIFT now require internal SWIFT domain expertise with annual certifications and annual documentation
- IT's focus is on building 1x1 bank connections instead of working on strategic initiatives.

Kyriba Connectivity Network for SAP

Accelerating the Time-to-Value for S/4HANA

Connectivity as a Service with Bolt-on Bank Connectivity for SAP to 1,000+ Banks

BANK CONNECTIVITY



Global bank monitoring of all incoming and outgoing files; fully outsourced banking support

Bank Monitoring

45,000+ pre-developed and bank tested payment format scenarios shared across all clients

PAYMENT FORMAT LIBRARY

Customized Payment Fraud Management utilizing detection rules coupled with machine learning

Payment Fraud

Bank Connectivity as a Service

Kyriba runs the world's largest Bank Connectivity service

- 1,000+ active configured and tested bank connections for plug & play SAP connectivity
- Library of developed and tested global payment formats
- Fully outsourced connectivity service, no client internal IT resources required
- No internal SWIFT domain expertise or annual certifications/testing required
- API, FTP, SWIFT, Regional Protocols
- Largest Corporate SWIFT Service's Bureau globally - 20% of SWIFT Corporate runs through Kyriba

The Bank Onboarding Process

BANK ONBOARDING DEFINITION

SAP ECC — CONNECTIVITY — HSBC

PAYMENT FORMATS (4)

PEOPLE NEEDED

INTERNAL

PROJECT LEAD | SECURITY AND NET. LEAD | MESSAGING EXPERTS | SUPPORT LEAD | TECH LEAD

HSBC

DOCUMENTATION CONTACT | TECHNICAL CONTACT | RELATIONSHIP MANAGER

SAP ECC

ACCOUNT MANAGER | TECHNICAL CONTACT | FUNCTIONAL CONTACT

CONNECTIVITY

SAP ECC — H2H — SWIFT — HSBC

BUILD CONNECTION TO BANK

6 - 8 WEEKS

PAYMENT FORMATS

INTERNAL + HSBC + SAP ECC

INTERNAL

REQUEST SPECS	WRITE SPECS	DEVELOP SPECS	TEST SPECS	SIGN OFF SPECS
1-2 W	1-2W	1-2W	2-4M	1-2W

DEV → UAT → PROD

2-3W

1 BANK, 1 COUNTRY 4 FORMATS

LAPSED TIME: 4-6 MONTHS

MAN HOURS: 400 - 600 HOURS

6 Keys: Currency, From / to, Banking Group, Urgency, Debit / Credit type

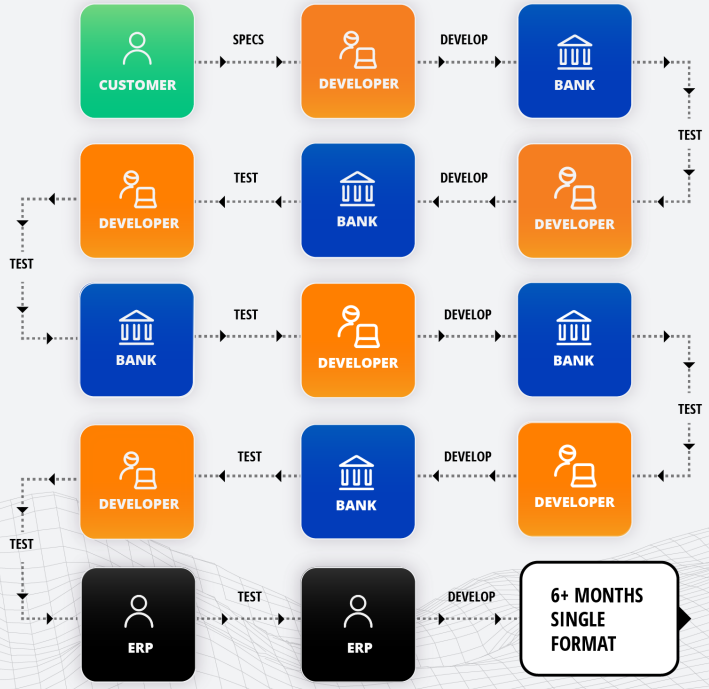
BANKS (20) × BRANCHES (3) = 60 BANK COUNTRY COMBINATIONS – 240 FORMATS =

60 * (400 – 600) = 24000 – 36000 MAN HOURS @£100 / Hour = £2.4M - £3.6M

Traditional ERP Payment Development

- All payment templates must be individually developed and tested with the bank
- Developers must coordinate all testing with the bank's tech team
- Format typically fails first test, multiple tests required.
- Must work on the bank timeline and time zone
- Average timeline from development to ERP production is 3-6 months

Example: Transfer, non-urgent, from Citibank HK to Barclays Ireland, with FX, in XML Pain .001.001.03



For just LATAM, Colgate needs 90+ format scenarios developed and tested across 21 banks

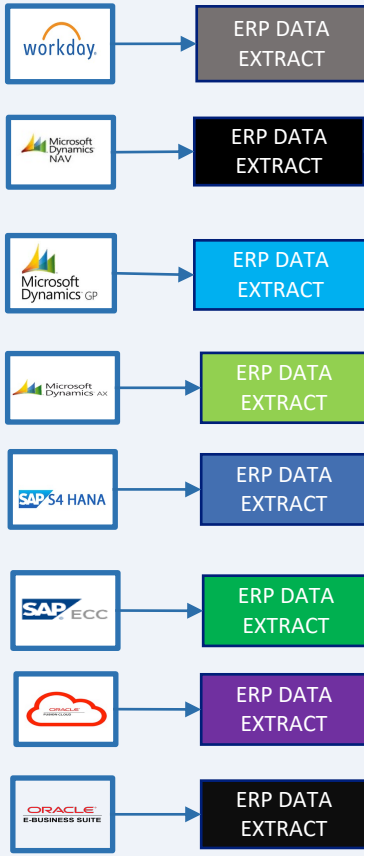
- Average 3-4 payment templates per bank

Kyriba Client Shared Payment Format Library

45,000+ off the shared shelf formats

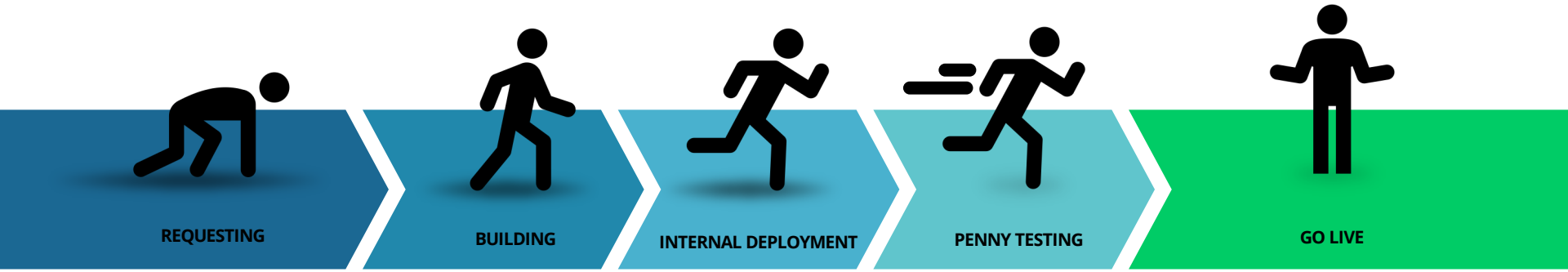
- 20 Years in development – full time staff of 7+
- Single payment file from SAP, Kyriba interprets and transforms all payments to approved format per bank
- Payment Formats are shared across multi-tenant architecture
- Ongoing maintenance of all formats
- Formats are productized under SLA
- No client IT resources required – Kyriba manages all bank communications and testing
- Governed under SOC 1 and SOC 2

Example of a Complex Connectivity Landscape



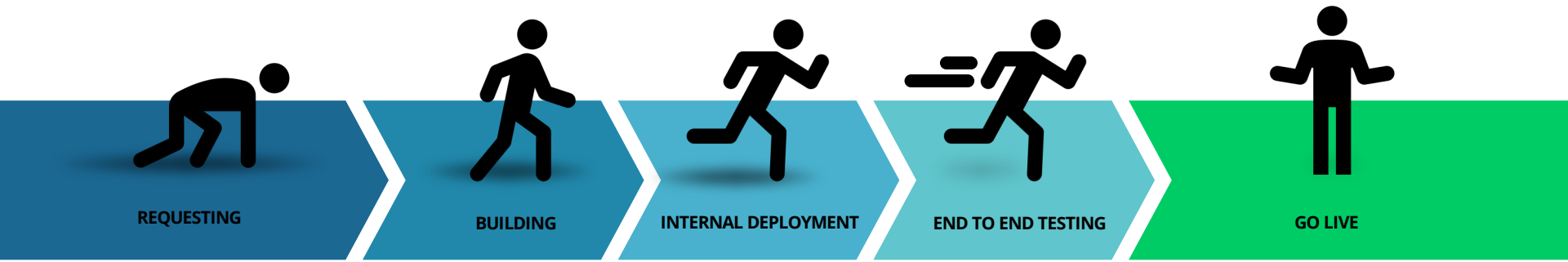
KYRIBA HANDLES THE BANK CONNECTIVITY AND THE TESTING, DEPLOYMENT AND MAINTAINENCE OF ALL THE PAYMENT FORMATS AS A MANAGED SERVICE

Kyriba Vs DIY



MILE 23

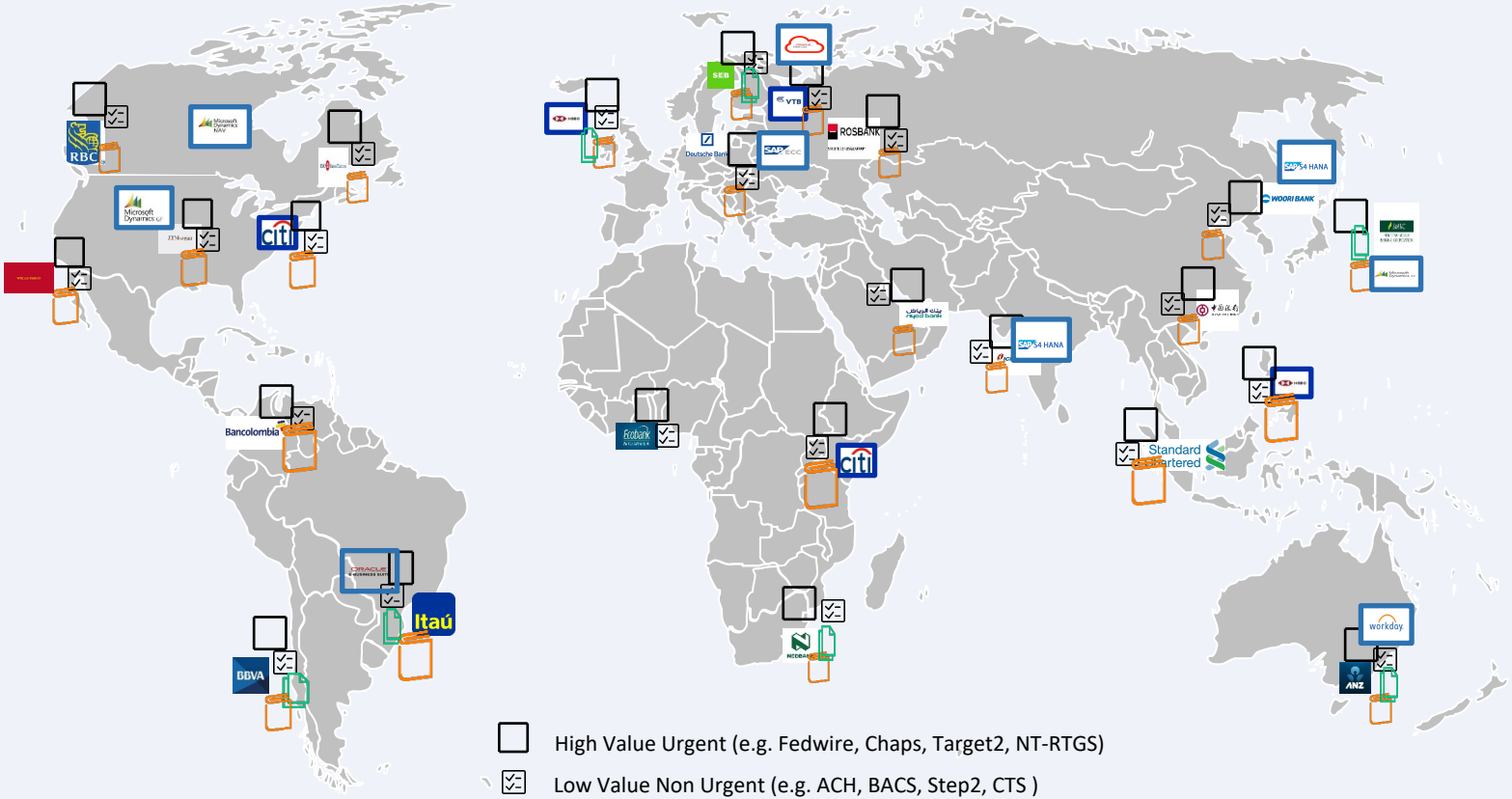
MARATHON 26 MILES – WITH KYRIBA



MILE 0

MARATHON 26 MILES – BY YOURSELF

EXAMPLE CONNECTIVITY PICTURE



High Value Urgent (e.g. Fedwire, Chaps, Target2, NT-RTGS)

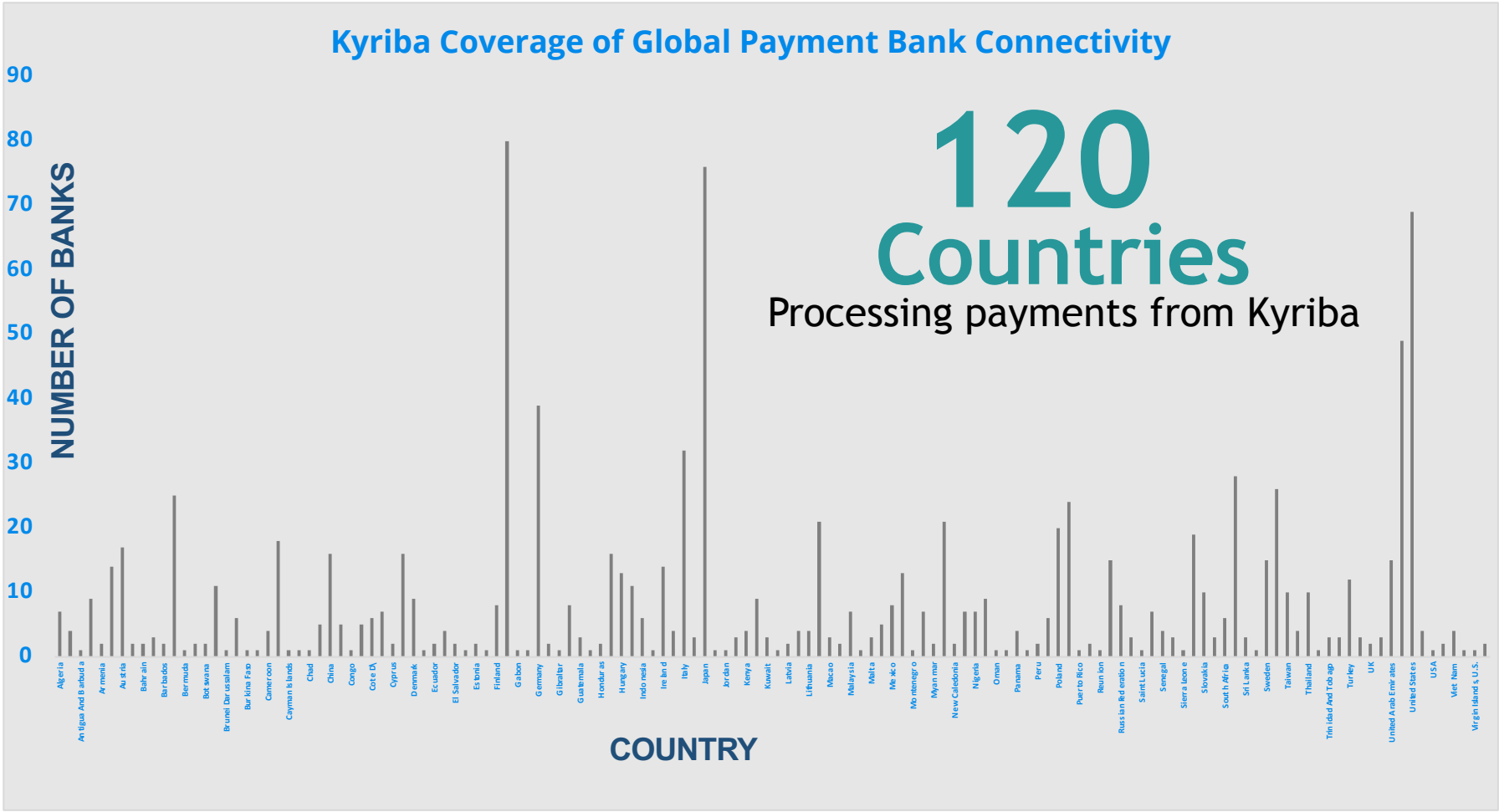
Low Value Non Urgent (e.g. ACH, BACS, Step2, CTS)

Low Value Real Time (e.g. Faster Payments, Zengin, FAST, Straksclearing – RTGS)

International (Swift MT101, XML Pain.001.001.03)

Topic 2

Managed Bank Connectiivty


Kyriba Coverage of Global Payment Bank Connectivity
120
Countries
Processing payments from Kyriba
NUMBER OF BANKS
COUNTRY
0
10
20
30
40
50
60
70
80
90
Algeria
Antigua And Barbuda
Armenia
Austria
Bahrain
Barbados
Bermuda
Botswana
Brunei Darussalam
Burkina Faso
Cameroon
Cayman Islands
Chad
China
Congo
Cote D\
Cyprus
Denmark
Ecuador
El Salvador
Estonia
Finland
Gabon
Germany
Gibraltar
Guatemala
Honduras
Hungary
Indonesia
Ireland
Italy
Japan
Jordan
Kenya
Kuwait
Latvia
Lithuania
Macao
Malaysia
Malta
Mexico
Montenegro
Myanmar
New Caledonia
Nigeria
Oman
Panama
Peru
Poland
Puerto Rico
Reunion
Russian Federation
Saint Lucia
Senegal
Sierra Leone
Slovakia
South Africa
Sri Lanka
Sweden
Taiwan
Thailand
Trinidad And Tobago
Turkey
UK
United Arab Emirates
United States
USA
Viet Nam
Virgin Islands, U.S.

Connectivity - 24/7 Global Bank Monitoring

- **3 Global Command Centers (San Diego, Paris, Tokyo)**
- **1,000+ Banks Connected and monitored 24/7**
- **110 Initiating Countries**
- **195 Receiving Countries**
- **35M Transactions a day run through Kyriba**

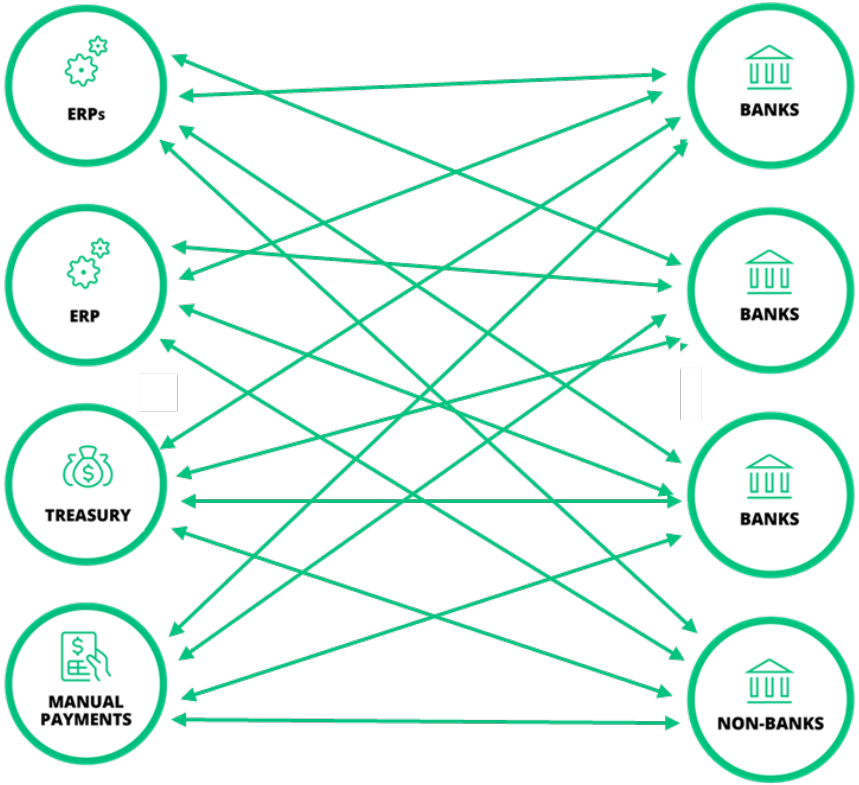
Bank Connectivity Complexity

Bank Statements

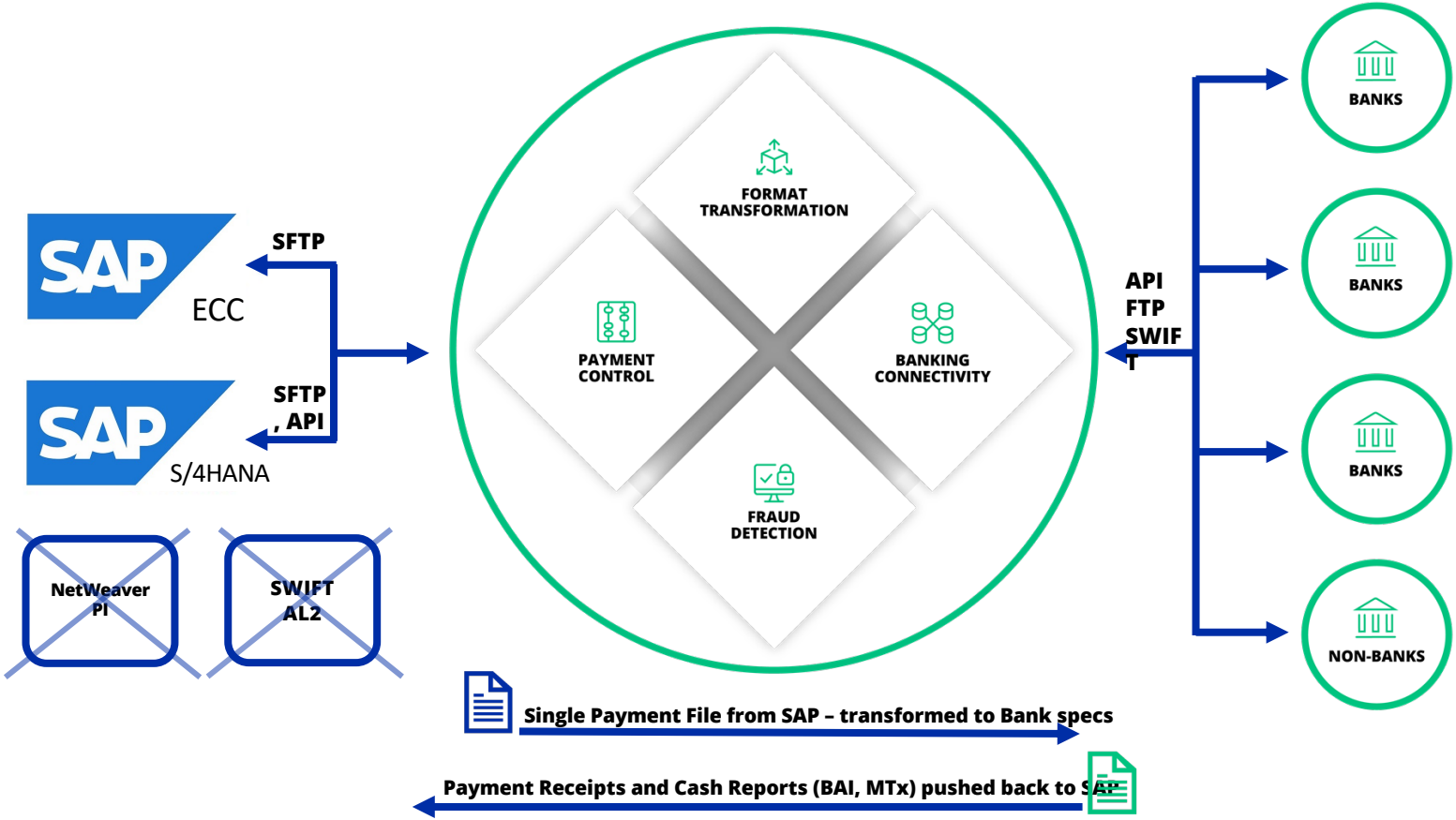
- Every Bank accounts requires 1x1 mapping back into each ERP.
- 300 bank accounts = 300 ERP integration
- Any change in bank statement needs to be mapped into SAP, new project

Payments

- Every unique payment format must be individual tested with each bank, 3-6 months per format
- 20 banks with 10 formats = 200 unique developments and testing
- Every time a bank has a format change is a new IT project



Kyriba Connectivity Network for S/4HANA



Topic 3

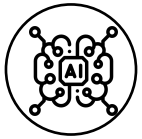
Payment Fraud

Kyriba Fraud and Compliance

Fraud Detection

Fraud Detection is managed on two workflows:

Customizable Risk rules



Machine Learning model

Sanction List Screening

Fully integrated solution, with sanction lists automatically updated daily

ACCUITY
FIRCO

Detect payments not compliant with sanction lists:

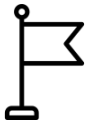
Proactive check to avoid frozen funds, fines, reputation damage

Rules Based and Machine Learning

Obvious anomalies → *Ambiguous anomalies* → *Limited signals of possible fraud*

Rule-based engine

Benefit from a large scope of anti-fraud controls



Be in control of when you get alerted

Implement the rules to comply with internal policies

Machine Learning Model

Get alerted when a payment is an anomaly compared to the payment history

Detect new fraud patterns

Let Kyriba manage all the maintenance required for efficient ML

Sample of Detection Rules

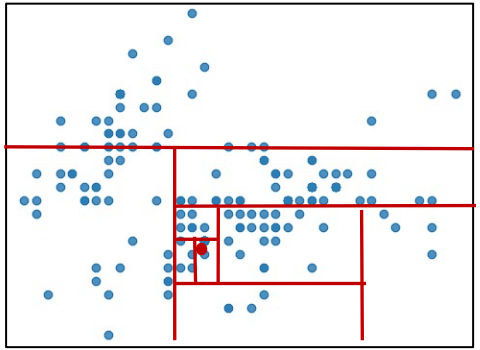
- 1st payment to a bank account but for an existing vendor
- High number of payments to the same vendor
- Payment to a country where you have no business
- Modification of a payment imported from back-office
- Vendor, beneficiary bank or country blacklisted according to a sanction list
- Inconsistent Payor/Payee countries
- Unusual payment/amount/date
- Payment to high risk countries

Details on Machine Learning

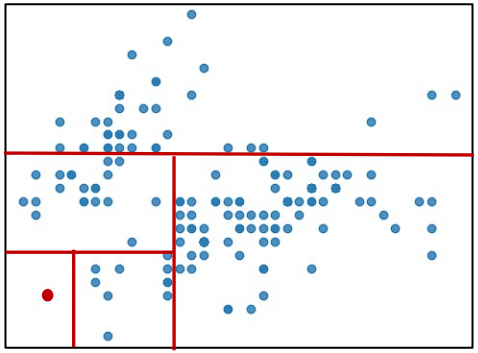
- Machine Learning models are algorithms available in open source.
- Our data scientists tested several of them and selected the one recommended by the literature for what we were trying to solve: detect an anomaly in a data set
- Machine learning model selected: **Isolation Forest**
  - "Isolation forest is an *unsupervised* learning algorithm for anomaly detection that works on the principle of *isolating* anomalies. In statistics, an anomaly (a.k.a. outlier) is an observation or event that deviates so much from other events to arouse suspicion it was generated by a different mean."

Anomalies require fewer random partitions to be isolated, compared to normal points
Simple example with a data set represented in 2D

Normal point : 8 random partitions



Anomaly : 4 random partitions



Topic 4

Business Case

kyriba

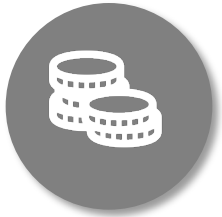
ROI - Kyriba Connectivity Network vs ERP

BUILD

vs

BUY

Qualitative Summary



Cost Reduction and Predictability

Speed and On-Going Flexibility

Fraud Detection

Bank Grade Security

Contractual Business Continuity

All Inclusive Product & Service Based Offering

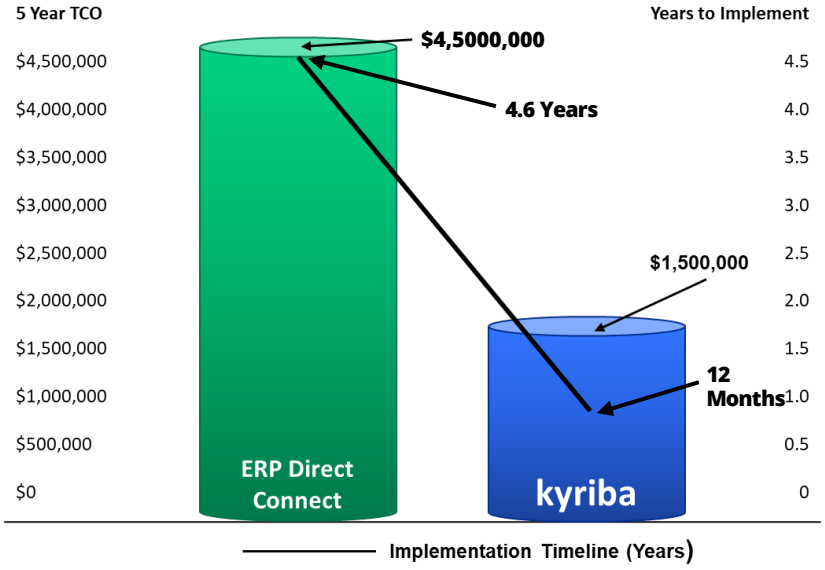
ROI – Kyriba Connectivity Network vs ERP

Itemized Cost and Time Comparisons

	Custom Developed ERP Bank Integrations	Kyriba Connectivity Network
Time to Integrate 1 new Bank	*Average 500-1,000 Hours	12 Hours
Average Integration Cost Per Bank	*$60,000-$200,000	$2,400
Annual Support of Bank Connections	~1 - IT FTE per 10-20 Banks	$3k/year subscription per bank
Capacity to add banks in a year	10-15 banks a year	50+ banks a year

*Depending on bank complexity, internal teams and bill rate

Actual Customer Analysis 5 Year TCO – 50 Banks: ~$3M Direct Cost Reduction and 1-year Implementation vs 4.6 Years



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THANK YOU

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VIDEO CONFERENCING GUIDELINES

PLAN AHEAD TO AVOID DISTRACTIONS

ENVIRONMENT

CAMERA POSITIONING

Camera should be centered at or above eye-level, maintain eye contact with the camera

PROPER LIGHTING

Present in a well-lit room with the light facing towards you, avoiding windows behind or next to you

RECOMMENDED BACKGROUND

Bookshelves or neutral pictures make for distraction-free natural backgrounds

PRESENTATION

PREPARATION

Test platform, internet connection, microphone, speakers and video

WHEN TO MUTE

Be sure to mute your microphone when you are not speaking and unmute when necessary

DRESS/OUTFIT

Dress professionally, wearing the same outfit you would in a face-to-face presentation

WARNINGS

TYPING ETIQUETTE

Try not to type while presenting

EATING

Do not eat while presenting and avoid drinking where possible

INTERRUPTIONS

Minimize interruptions such as muting your cell phone and closing your door

MOVEMENT

Avoid a lot of movement, including hand gestures that may stutter the video

DART Methodology

DART Methodology

Drivers (D)

These are macro level events that are impacting an organization. They can be both external and internal and require the implementation of strategic plans, people, processes and systems.

- High total cost of ownership (TCO) of legacy ERP systems
- Need for continuous innovation
- (Shortening of product lifecycles and demand for more customized products, services and pricing models)

Actions (A)

These are strategies that companies can implement to address the drivers impact on the business. These are the integration of people, process and technology.

- Create a sustainable digital innovation strategy that enables your company to identify new revenue streams, lower costs, and improve current products and services
- Deploy a cloud based or hybrid business architecture to minimize costs and maximize speed to market
- Prioritize specific business processes for intelligent automation based on ROI and cost models
- Modernize your reporting, dashboard, and insights strategy to provide more real-time and high-value views into your business

Requirements (R)

These are business and process level requirements to support the strategies.

- Faster consumer-driven innovation via real-time customer insights
- KPIs and ROI model for business process improvement and business impact measures
- Self-service reporting and analytics
- Platform for custom product and pricing configuration
- Strong data cleansing, data management, and data governance practices
- Elimination of long deployment and upgrade cycles
- Elimination of complex patching and testing cycles
- Business and IT team buy-in for next level ERP via a bottom-up business case
- A clear owner to manage advancement of ERP

Technologies (T)

These are technology and systems related requirements that enable the business requirements and support the overall strategies that the company is taking.

- On-premise and cloud-based ERP deployment models
- Mobile and responsive-based UI
- Highly integrated financial planning and management solution
- Rich developer framework for customizing and extending both cloud and on premise applications
- Powerfully integrated advanced analytics and visualization tools
- Integrated financial, sales and operational planning solutions
- Best-in-class Cloud and on-premise middleware solutions
- End-to Customer data management
- Customer profiling and intelligence

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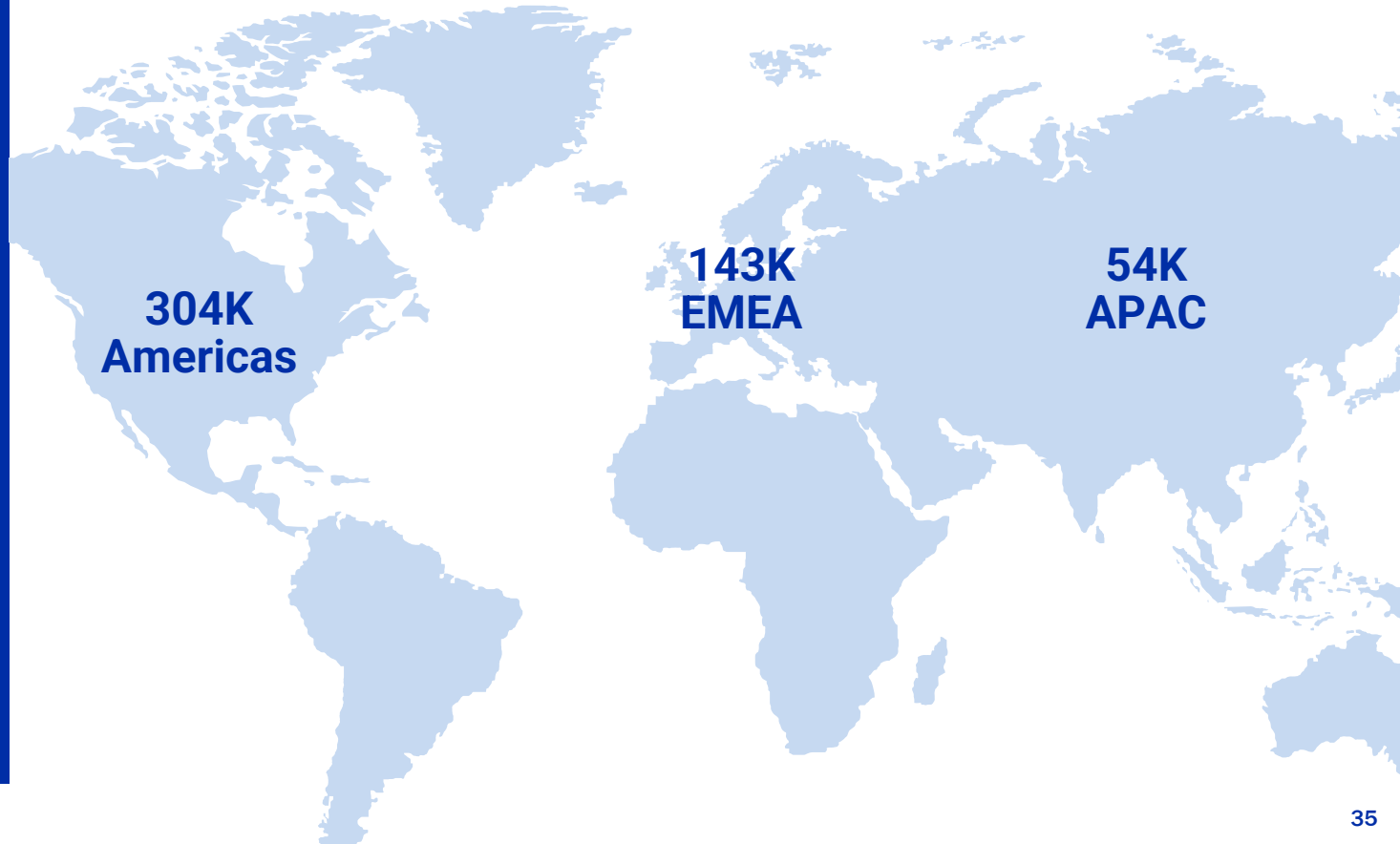
46,000
COMPANIES

205
COUNTRIES

20%
LINE OF BUSINESS

80%
TECHNOLOGY



CIO	ERP Platform & Technology	Application Development & Integration	IT Operations & Administration	Data & Analytics	Security	Financial Management	Governance, Risk & Compliance	Human Capital Management	Supply Chain Management	Customer Experience
SAP Strategy & Technology Investment	SAP S/4HANA	Application Development	Systems Administration	SAP HANA	Application Security	Finance & Accounting Strategy	Governance Strategy	Core HR	Spend Management & Procurement	eCommerce & Website Management
Teams & Organizational Structure	SAP ECC	Integration	Quality & Testing	Data Management & Data Warehousing	Data Security	SAP S/4HANA Finance & Central Finance	Enterprise Risk Management	Payroll	Demand Management & Pricing	Marketing Automation & Analytics
Market Trends & Analysis	Cloud Deployment & Infrastructure			AI & Machine Learning	Identity & Access Management	Financial Planning, Reporting & Analysis	Process Control	Talent Management & Recruiting	Supply Chain Planning	Sales Management
				Robotic Process Automation		Core Accounting & Financial Close	Access Control	Employee Experience	Logistics & Transportation	Customer Service
				Analytics		Tax & Tariff Management	Audit Management	HR Analytics & Workforce Planning	Manufacturing	
						Revenue Management	Fraud Management		Product Management	
						Travel & Expense Management			Asset Management	
						Cost & Margin Analysis			Supply Chain Automation	
						Automation in Finance				