SWIFT

SWIFT Operations Forum Asia Pacific

Welcome remarks

Harry Newman, Head of Banking, SWIFT
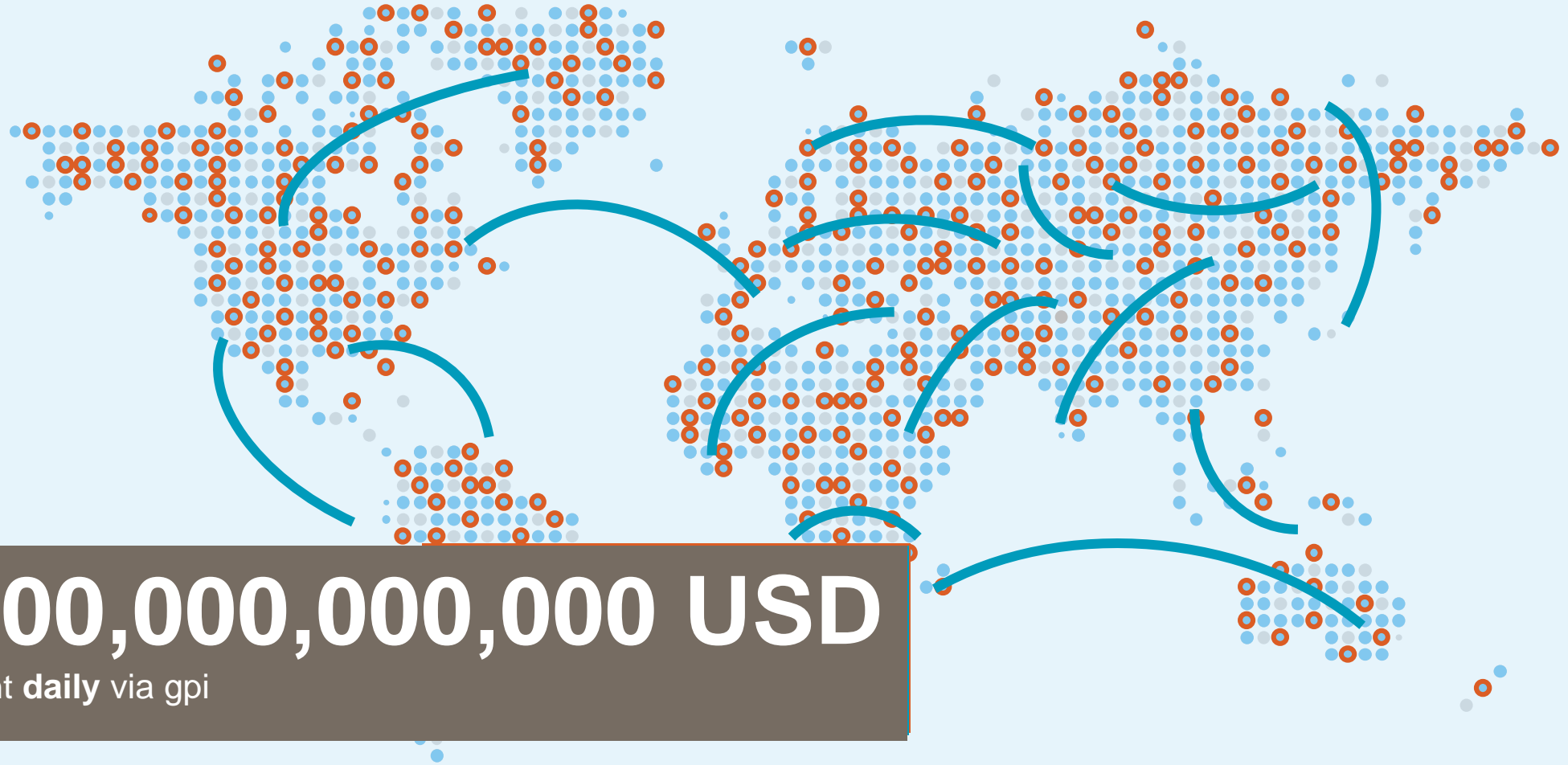
Cross-border payments, transformed

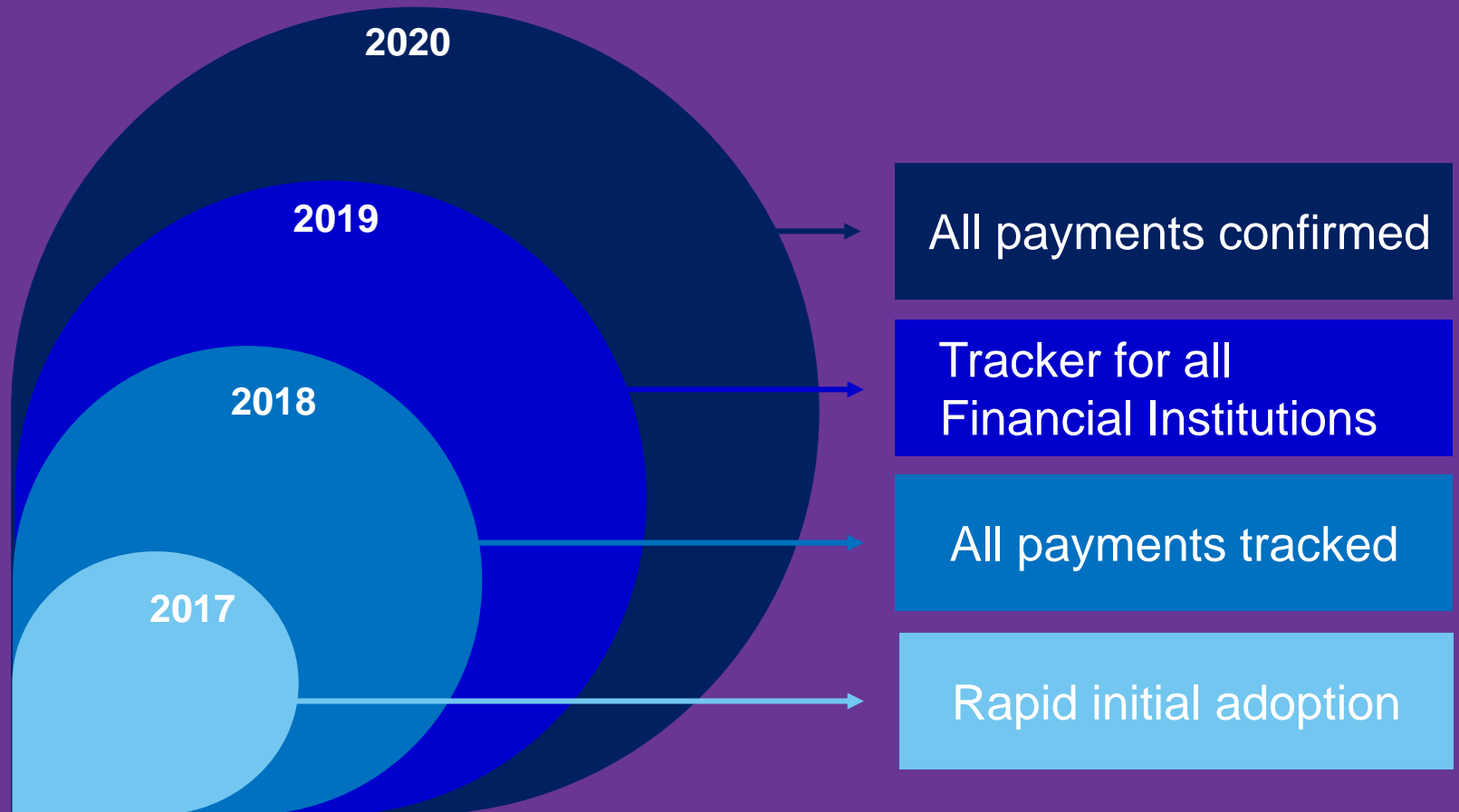October 2019

gpi adoption

300,000,000,000 USD
sent **daily** via gpi

SWIFT

The new norm

2020 — All payments confirmed

2019 — Tracker for all Financial Institutions

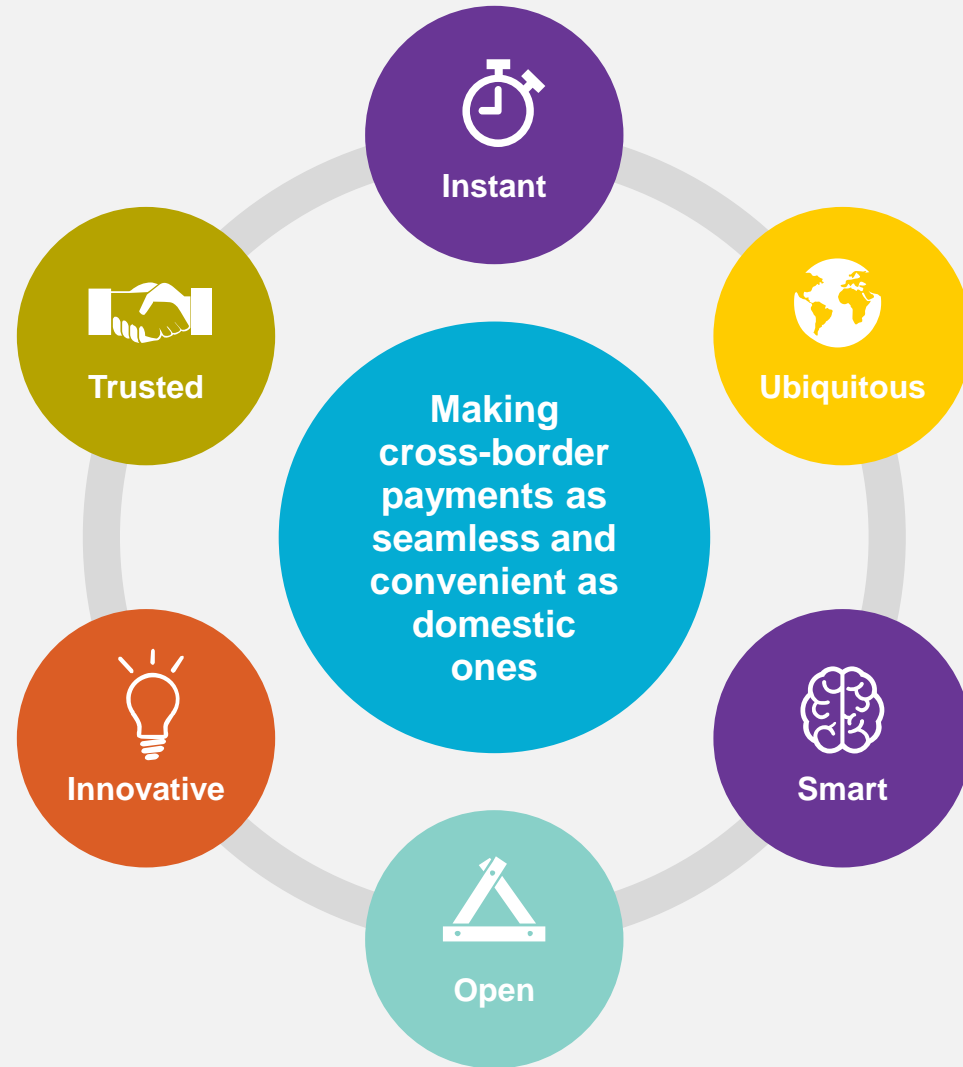2018 — All payments tracked

2017 — Rapid initial adoption

SWIFT

So where next?

To make cross-border payments as seamless and convenient as domestic ones: **instant, accessible, ubiquitous …and data rich**

SWIFT

The future of payments

Instant

Ubiquitous

Smart

Open

Innovative

Trusted

Making cross-border payments as seamless and convenient as domestic ones

SWIFT

Cross-border
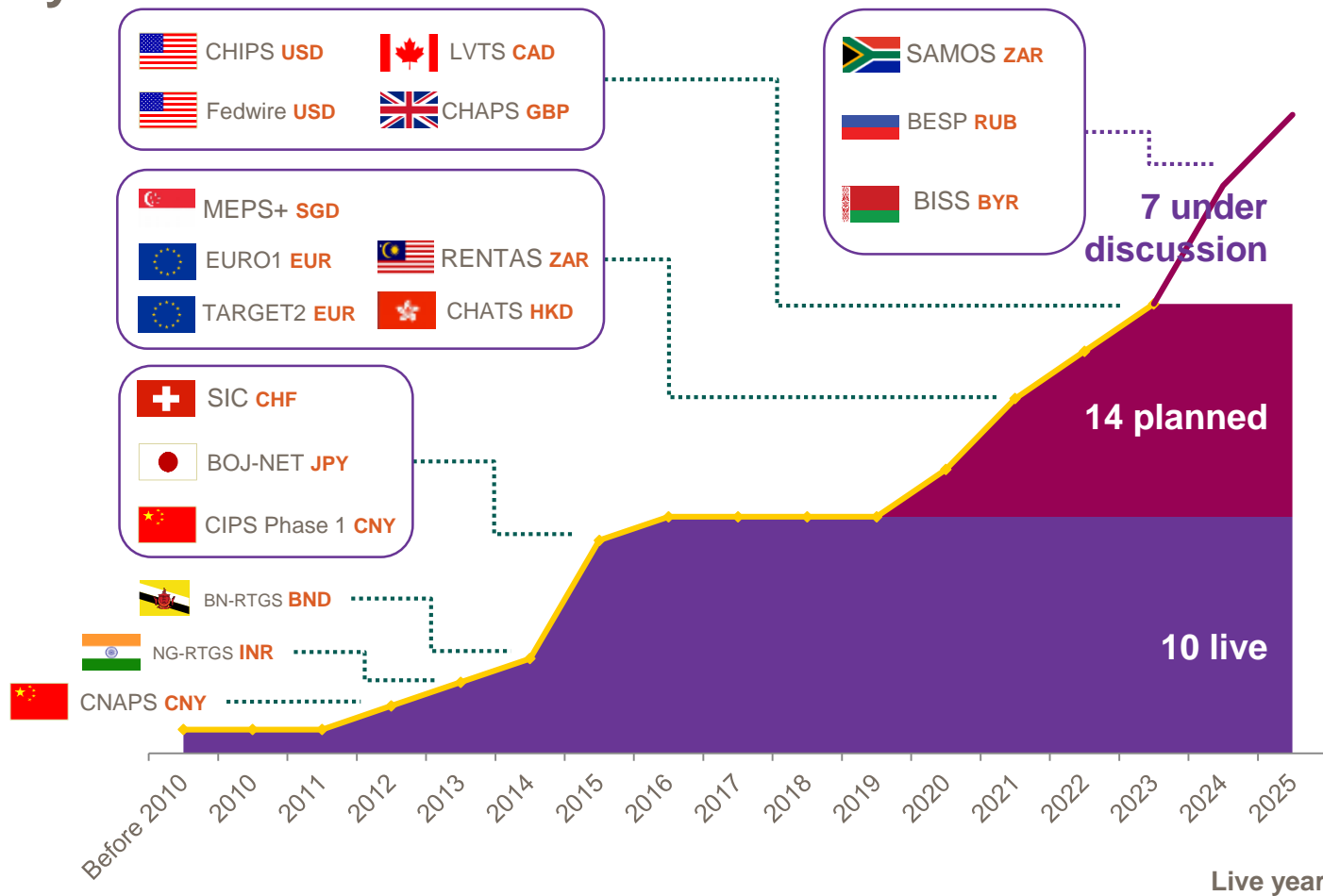## instant payments
with gpi

SWIFT gpi tracker

Use case 1 – Real-time cross-border payment, via gpi between 2 banks *In progress*

Use case 2 – Real-time cross-border payment, via gpi into domestic instant payment system *In progress*

Use case 3 – Real-time end-to-end payment, from one domestic instant payment system to another via gpi *Planned*

80% of global high value payments volumes will adopt ISO 20022 by 2025

CHIPS **USD**
Fedwire **USD**
LVTS **CAD**
CHAPS **GBP**

MEPS+ **SGD**
EURO1 **EUR**
TARGET2 **EUR**
RENTAS **ZAR**
CHATS **HKD**

SIC **CHF**
BOJ-NET **JPY**
CIPS Phase 1 **CNY**

BN-RTGS **BND**
NG-RTGS **INR**
CNAPS **CNY**

SAMOS **ZAR**
BESP **RUB**
BISS **BYR**

7 under discussion

14 planned

10 live

Live year

Before 2010, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025

All reserve currencies are either live or have declared a live date: USD, EUR, JPY, GBP, CNY, CHF

SWIFT

ISO 20022 enables

ISO 20022

Rich rails

Harmonisation with payment systems

Domestic payment systems of all major currencies are either live or in progress of going live with ISO 20022

Rich customer experience

Send rich remittance information end to end from payment initiation, to cross-border and domestic customer credit transfers, to customer statements

Compliance

FATF recommendation #16 and local regulations typically require intermediary FI's to transmit all originator and beneficiary details received from a counterparty

Efficiency

Rich, structured, mandatory data will significantly improve efficiency of screening, reconciliation and payment processing

SWIFT

Let's do it together

Let's realise the vision – together

The foundations are laid	**A simple vision**	**gpi instant and ISO20022**
gpi is proven and will be ubiquitous by 2020 – the first step in the payments revolution	To make real-time, 24/7 cross-border payments as seamless, convenient, cost-efficient and accessible as domestic ones	Integrating cross border payments with domestic systems in a data rich ISO 20022 environment

SWIFT

A Vision for the Future of Payments

Moderator:

Astrid Coppens, Head of Cloud and Interfaces, Product Management, SWIFT

Speakers:

Judy Bei, Managing Director, Global Head of Payments and Receivables, Standard Chartered Bank

David Koh, Head of Global Liquidity & Cash Management, HSBC Singapore

Michael Moon, Managing Director, Payments, Trade & Communications, APAC, SWIFT

Debopama Sen, Head of Treasury and Trade Solutions, Citibank

Panel Discussion: A Vision for the Future of Payments

Astrid Coppens

SWIFT

Judy Bei

Standard
Chartered Bank

David Koh

HSBC

Michael Moon

SWIFT

Debopama Sen

Citibank

The future of cross-border payments with SWIFTgpi

(Part 2: Focus on gpi roadmap & new services to better support the banks and corporates)

Laetitia Moncarz, Director Payments Markets, APAC, SWIFT
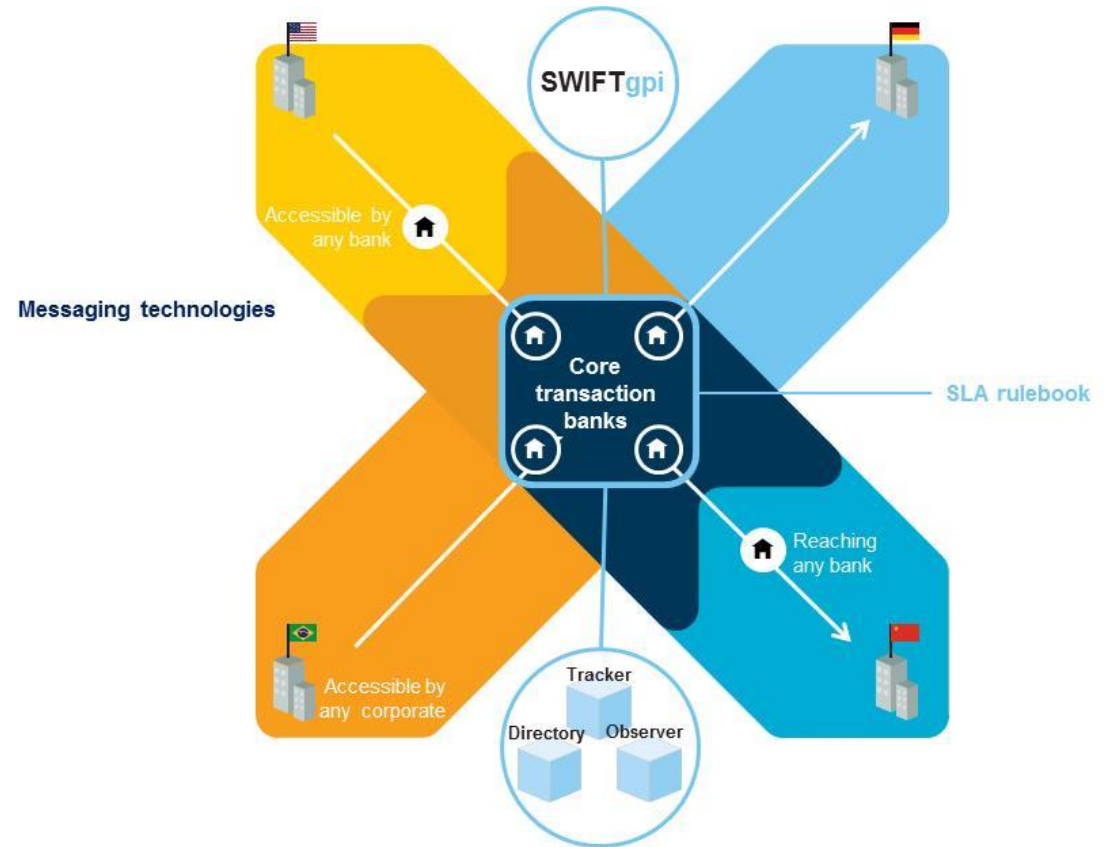
Harry Newman, Head of Banking, SWIFT

Gpi in a nutshell

SWIFT gpi
Cross-border payments, transformed

➢ Faster, same day* use of funds

➢ Transparency of fees

➢ End-to-end payments tracking

➢ Remittance information transferred unaltered

Swift GPI benefits in a nutshell

Fast payments
Credit international beneficiaries in seconds and, at most, minutes

Unaltered remittance information
Ensure remittance data is unchanged when payment arrives

Ease of implementation
Use your existing SWIFT set up and go live within three months

End-to-end tracking
Track payments end-to-end in real time

Reduced costs
Benefit from reduced enquiry costs due to ability to track payments

Confirmed credit
Receive a credit confirmation message when your beneficiary has been paid

Fee and FX transparency
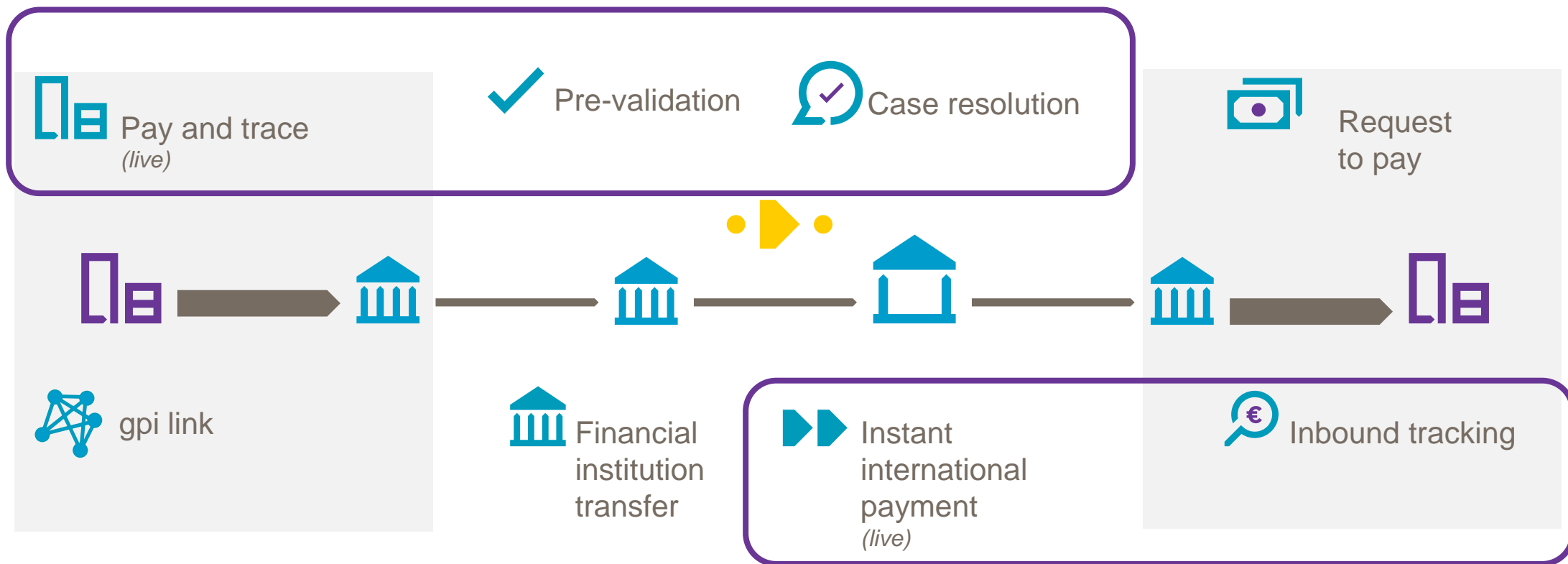See bank fees charged and FX rates applied

Optimised liquidity
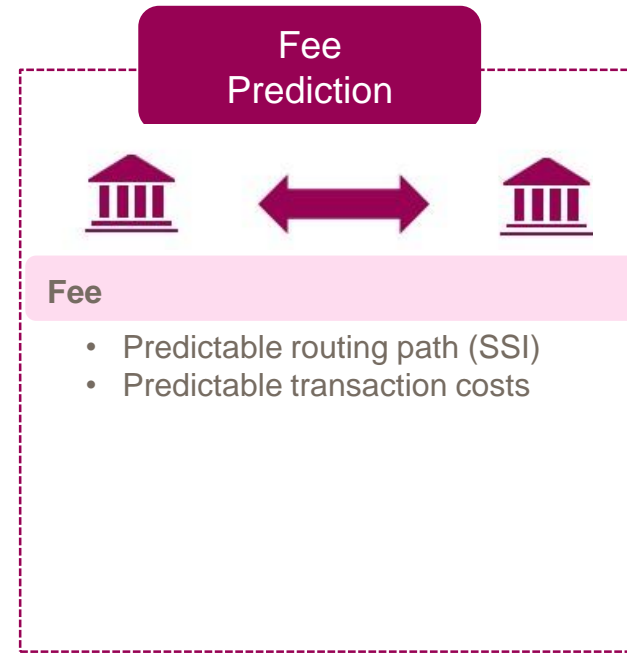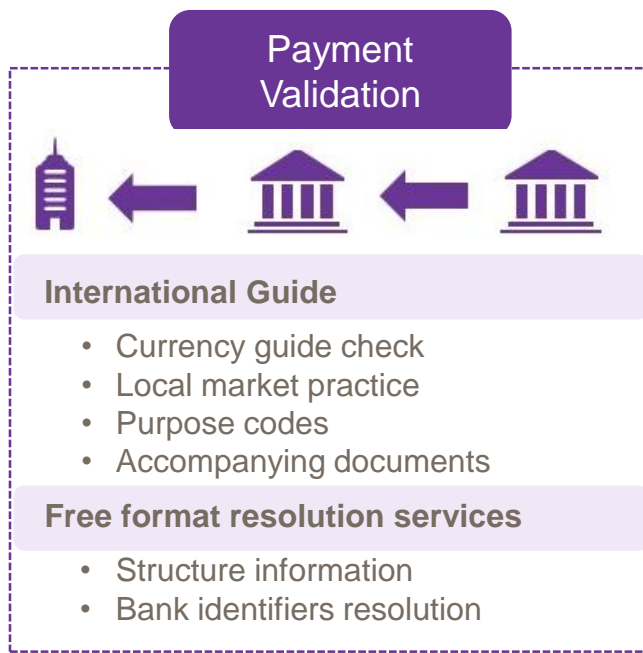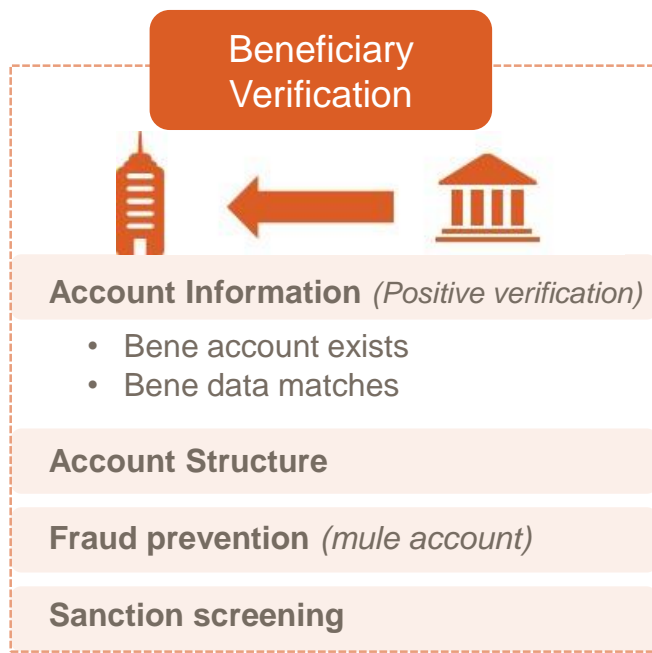Make the most of your liquidity because of visibility of payments

Roadmap

Pay and trace
(live)

Pre-validation

Case resolution

Request to pay

gpi link

Financial institution transfer

Instant international payment
(live)

Inbound tracking

Pre-validation

SWIFT

Pre-validation initiative

Beneficiary Verification

Account Information *(Positive verification)*
- Bene account exists
- Bene data matches

Account Structure

Fraud prevention *(mule account)*

Sanction screening

Payment Validation

International Guide
- Currency guide check
- Local market practice
- Purpose codes
- Accompanying documents

Free format resolution services
- Structure information
- Bank identifiers resolution

Fee Prediction

Fee
- Predictable routing path (SSI)
- Predictable transaction costs

Value Proposition

- ✓ **Increase STP rate for cross-border payments**
- ✓ **Predictable outcome**

Service benefits

- **Increased speed**: Speed up the transfer of funds to the end beneficiary

- **Provide value-added service & better experience to end customers**

- **Reduced manual interventions**: Reduce the number of exceptions & investigations by detecting and correcting non-STP situations before initiating a payment

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Case Resolution

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Case resolution value proposition
Improving customer service and increasing operational efficiencies
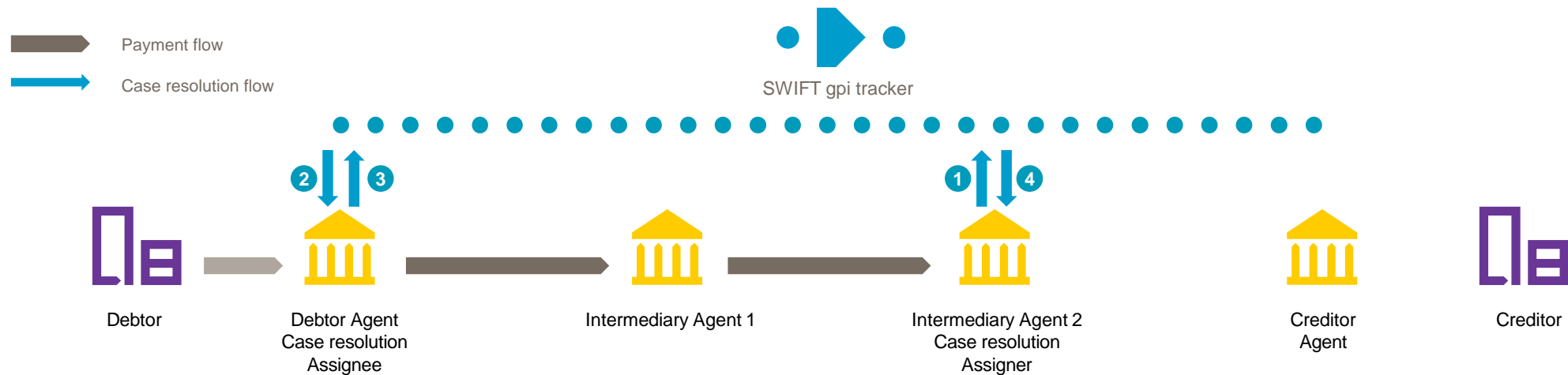
Value Proposition ➡ Service benefits

Improved customer service

Increased operational efficiencies

Improved transparency	**via the Tracker, follow case requests anywhere in the gpi CUG and record related interbank communications in an audit trail**
Shorten resolution time	smartly route enquiry requests to case resolution Assignee using the Tracker and ensure timely follow up with SLAs and RuleBook
Reduced manual intervention:	use structured codes to standardise communications, avoid duplicate inquiries on same payment and facilitate enquiries' process automation by case management software solutions

Gpi Instant

What use cases are in scope for gpi Instant today?

gpi tracker

Domestic instant payment system   gpi cross-border   Domestic instant payment system

Use case 1 – Instant cross-border payment, between gpi banks

Use case 2 – Instant cross-border payment, via gpi banks into domestic instant payment system

gpi Instant trials successfully completed with AU-NPP, SG-FAST & EU-TIPS soon!

Why are the trials a success?

- Established **globally scalable model** to integrate gpi flows onward & inward via domestic IP* systems globally.

- **Maximised reuse** & **minimised complexity** in implementing cross-border instant payments

- Industrialised **faster end to end speed** outcomes across multiple country corridors

- Reduced time zone gap for payments from North America and EU to SG. Maximum time difference was **12 hours (Canada-Singapore)**

- Demonstrated **extended operating hours** by successfully processing SWIFTgpi payments outside business hours with AU-NPP and TIPS

	AU	SG	EU
Global Participants	12	17	19
Fastest Time	18	13	41 seconds
Settlement confirmed for all transactions	<60	<25	<60 seconds
Average Time	50	19	81 seconds

*Instant Payments

Gpi for corporates

SWIFT gpi for Corporates

Corporate

Receivables	Payables

Inbound tracking

Pilot (Sep 2019)

Provides visibility on incoming payments and leverages insights such as proof of execution, short term forecasting and real time confirmation of credit.

Pay & trace

Live

Optimizing your cross border payments with transparency and tracking capabilities directly integrated in your treasury dashboards

Request to pay
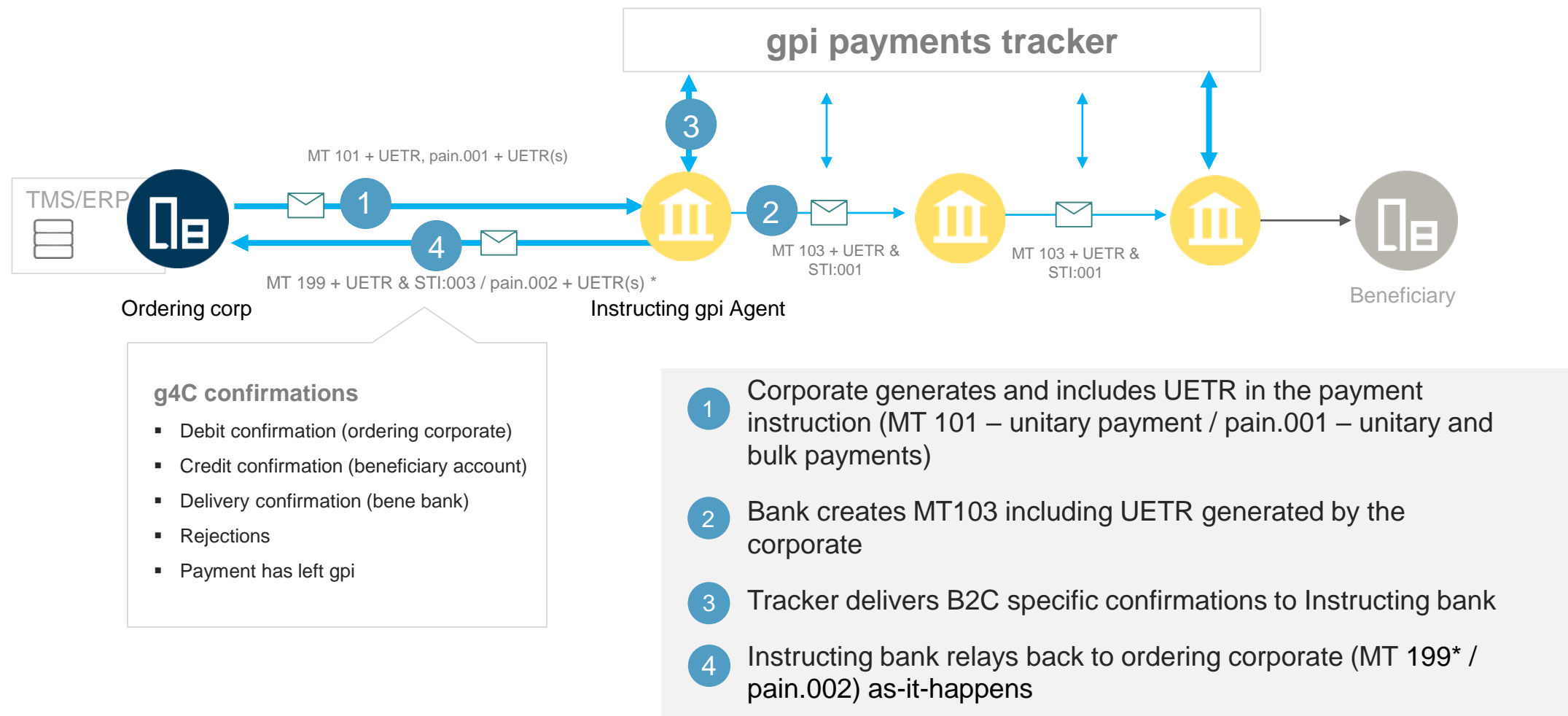
Proof of Concept (2019)

Optimize collection processes by connecting invoice generation data together with payment initiation. Facilitating buyer and seller exchanges in a cross border context.

g4C service level agreement rulebook

Pay & trace

gpi payments tracker

MT 101 + UETR, pain.001 + UETR(s)

TMS/ERP

Ordering corp

MT 199 + UETR & STI:003 / pain.002 + UETR(s) *

MT 103 + UETR & STI:001

MT 103 + UETR & STI:001

Instructing gpi Agent

Beneficiary

g4C confirmations

- Debit confirmation (ordering corporate)
- Credit confirmation (beneficiary account)
- Delivery confirmation (bene bank)
- Rejections
- Payment has left gpi

1 Corporate generates and includes UETR in the payment instruction (MT 101 – unitary payment / pain.001 – unitary and bulk payments)

2 Bank creates MT103 including UETR generated by the corporate

3 Tracker delivers B2C specific confirmations to Instructing bank

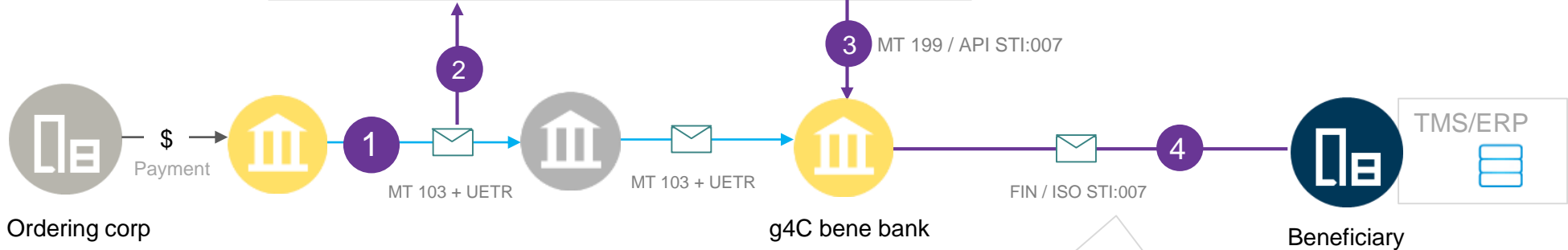**4** Instructing bank relays back to ordering corporate (MT 199* / pain.002) as-it-happens

*Banks can send pain.002 instead of MT 199 (single transaction confirmation as-it-happens) in mutual agreement with their corporate pairs. SWIFT will not support testing or perform format validation in pain.002 in the scope of Early Adopters Phase

Inbound tracking

gpi payments tracker

Ordering corp → $ Payment → MT 103 + UETR → MT 103 + UETR → g4C bene bank

② ③ MT 199 / API STI:007

① FIN / ISO STI:007 ④ Beneficiary TMS/ERP

1. Payment is initiated in the SWIFT network (MT 103)

2. Tracker identify g4C beneficiary bank and extracts payment details

3. Tracker delivers payment advice details to beneficiary bank

4. Beneficiary bank relays back to beneficiary corporate as-it-happens (FIN/ ISO)

g4C confirmations

- Payment advice (ordering bank)
- Delivery confirmation (at bene bank)
- Credit confirmation (at bene account)
- Rejections

Side firechat

Laetitia Moncarz

SWIFT

Harry Newman

SWIFT

Significance of ISO 20022 to financial services industry – translating operational efficiencies into business benefits

Moderator:

Simona Catanescu, Head of Standards and Capital Markets, ASEAN, SWIFT

Speakers:

Cheong Tak Leong, Director of Standards, Enterprise Singapore

Peter Hoogervorst, Regional Head of Transaction Banking Products Asia, Credit Agricole

Sharon Khua, Group Technology Architecture, OCBC

Jatin Praful Sheth, Group Payment Product Manager, DBS Global Transaction Services

Panel Discussion: Significance of ISO 20022 to financial services industry – translating operational efficiencies into business benefits

Simona Catanescu

SWIFT

Cheong Tak Leong

Enterprise Singapore

Peter Hoogervorst

Credit Agricole

Sharon Khua

OCBC

Jatin Praful Sheth

DBS

Adoption of DLT and development of API in Asia Pacific financial services industry

Yin Xu, Product Manager, SWIFT

Tom Alaerts, Principal, Standards Engagement, North Asia, SWIFT
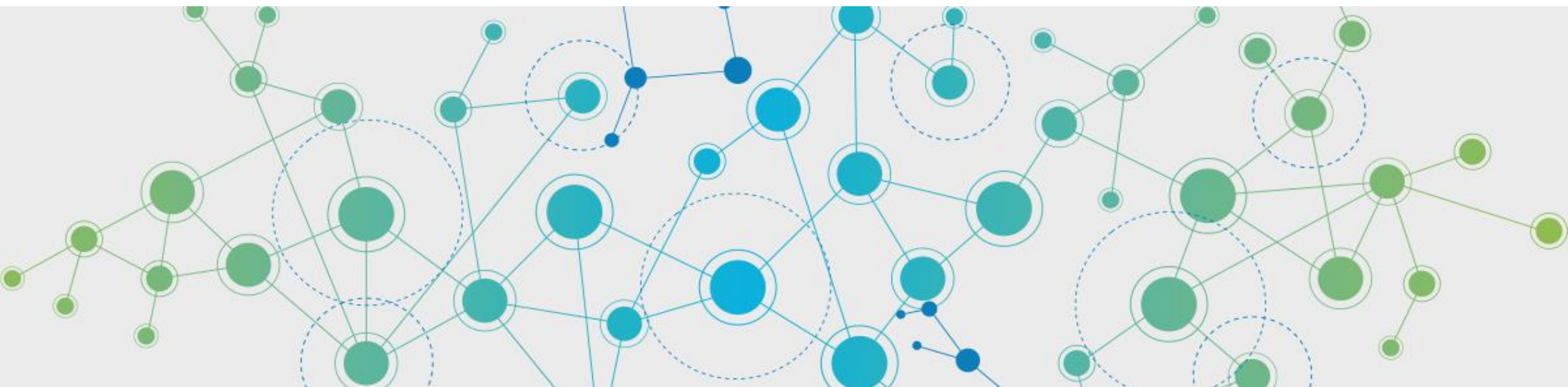
"Whatever the technology, in multi-party networked business, participants need to agree on the meaning and content of shared data, business processes, roles and responsibilities. This is the domain of *business standards*"

Enduring challenges

Varying API capabilities across firms

Inconsistent business specs

Fragmented API specs

Fragmentation

Varying identity & security frameworks

No standard data model
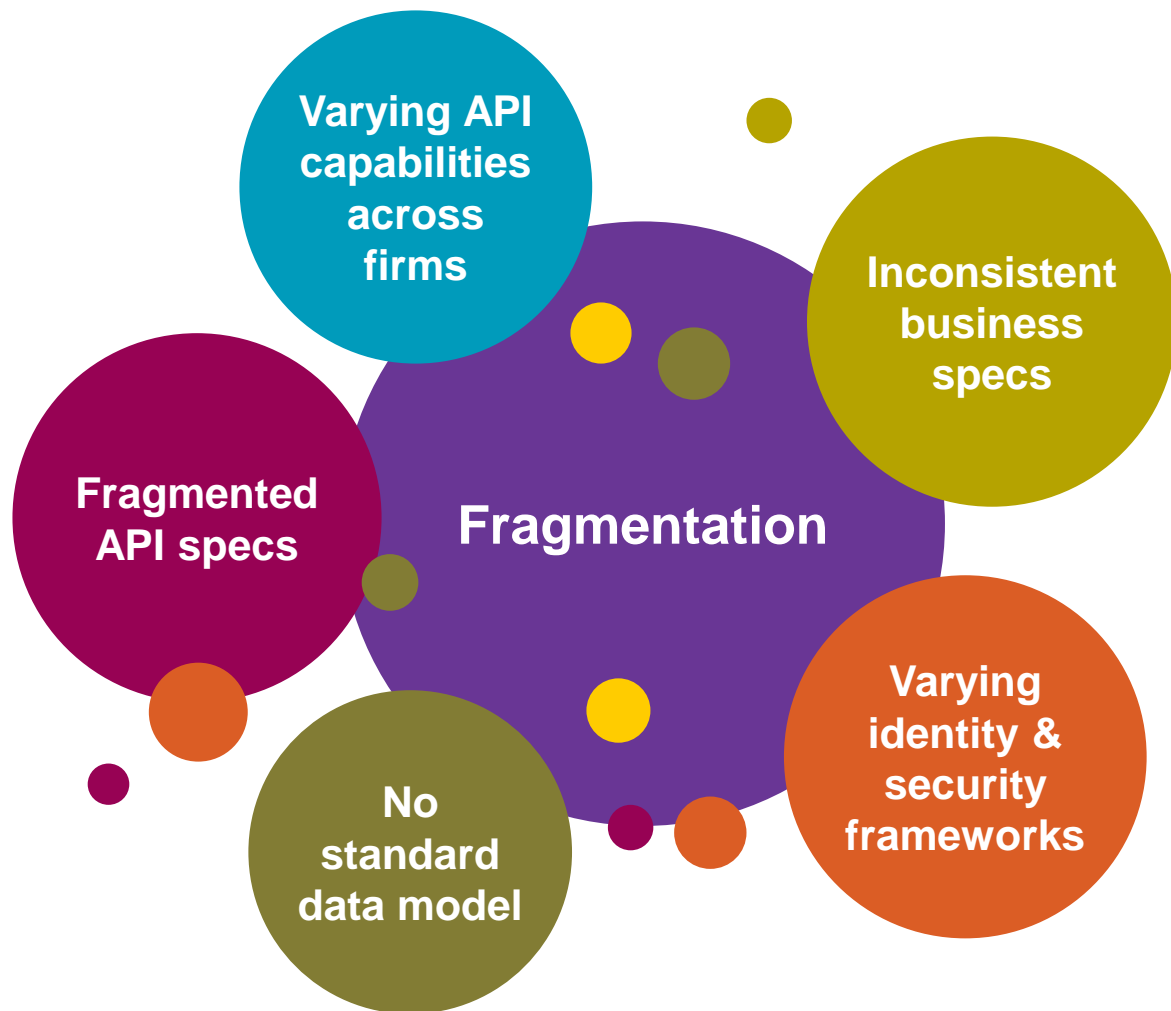
While APIs promise much – the API environment in financial services remains highly fragmented

API – Payload Specification with No Standard

	API Spec Flavor 1		API Spec Flavor 2		Challenges / Risks
	Value Date **Category Purpose**	VS	**Transaction Date** **Purpose**	→	**Semantics/Meaning -** **Misinterpretation**
	BAI Transaction code **Structured Address**	VS	**Proprietary code** **Unstructured Address**	→	**Data Types –** **Translation / Conversion**
	Max35Text Reference **2 Lines of Details**	VS	**Max12Text Reference** **4 Lines of Details**	→	**Format – Data loss /** **Truncation**

Was conceived to harmonise fragmented financial messaging standards landscape

Open and global standard

Platform & Technology Agnostic

Methodology to standardize financial transaction

Simplifies API integration into existing process & systems

Machine-processable repository of content

SWIFT

First, a short definition of ISO

As Single Standardisation approach used by all financial standards initiatives, ISO is…

A recipe to create financial standards…

Business / Conceptual

- Defines business meaning of financial **concepts**, e.g., 'Account' , data elements

Logical

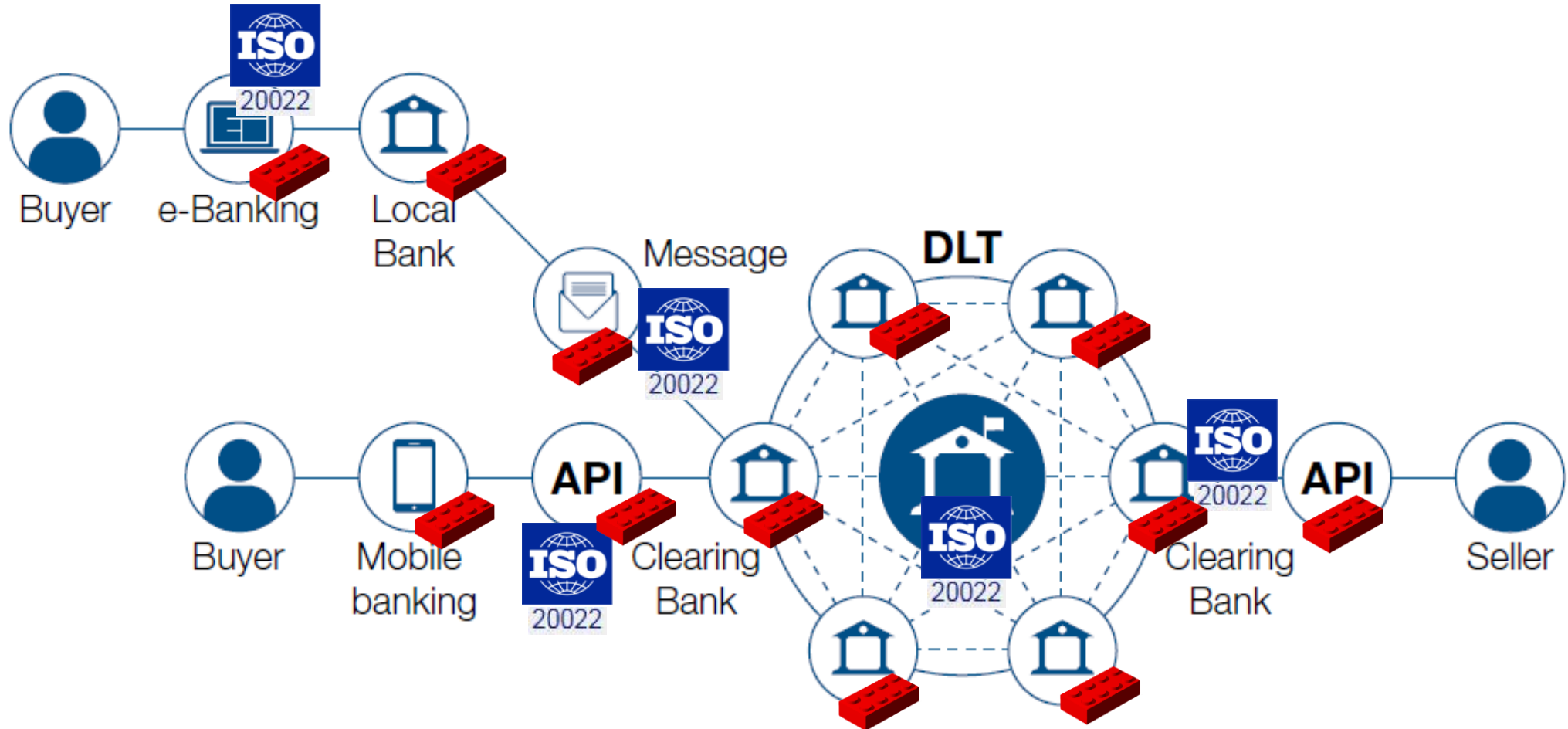- Defines the process required to define financial messages e.g. a 'credit transfer'
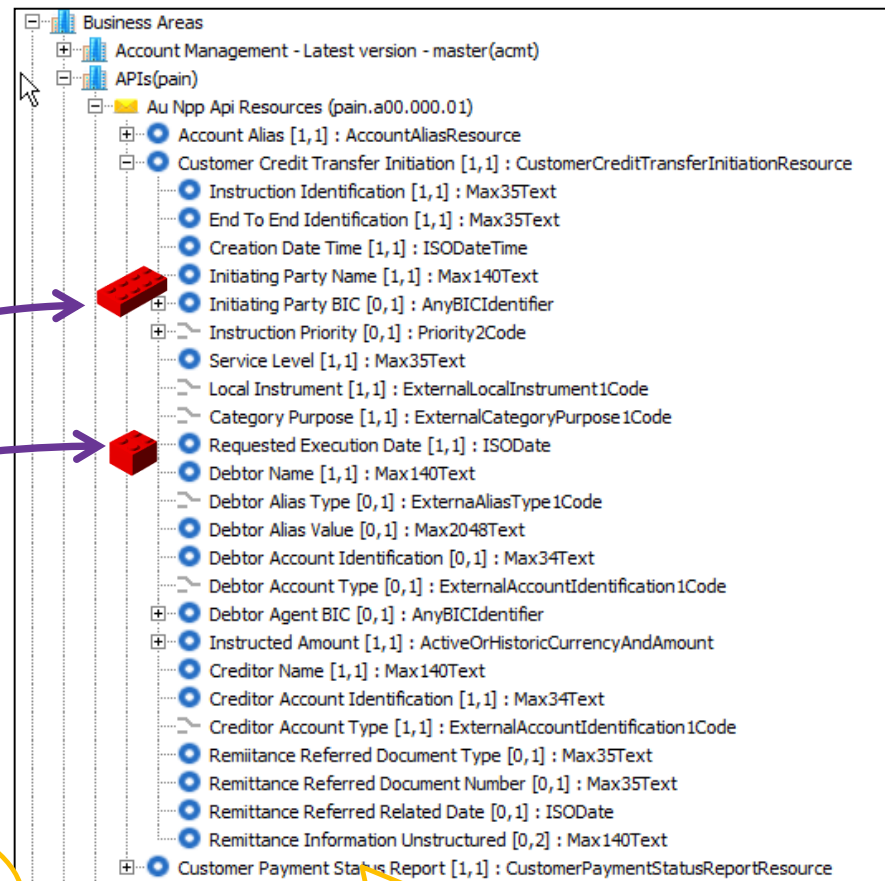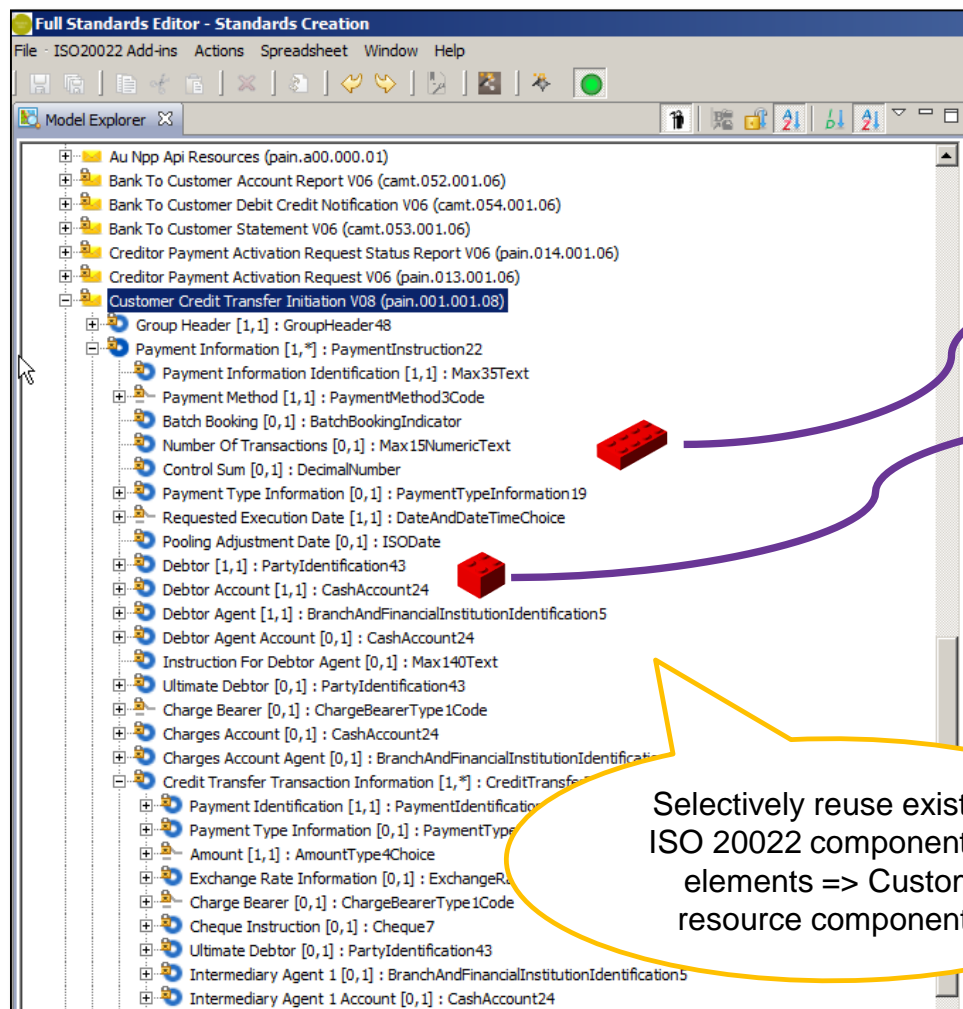
Physical

- Defines physical syntax, e.g. XML, *or JSON*

The business standards (vocabulary) can remain the same, independent of the underlying technology

Define the API Resources

Full Standards Editor - Standards Creation

File   ISO20022 Add-ins   Actions   Spreadsheet   Window   Help

Model Explorer

- Au Npp Api Resources (pain.a00.000.01)
- Bank To Customer Account Report V06 (camt.052.001.06)
- Bank To Customer Debit Credit Notification V06 (camt.054.001.06)
- Bank To Customer Statement V06 (camt.053.001.06)
- Creditor Payment Activation Request Status Report V06 (pain.014.001.06)
- Creditor Payment Activation Request V06 (pain.013.001.06)
- Customer Credit Transfer Initiation V08 (pain.001.001.08)
  - Group Header [1,1] : GroupHeader48
  - Payment Information [1,*] : PaymentInstruction22
    - Payment Information Identification [1,1] : Max35Text
    - Payment Method [1,1] : PaymentMethod3Code
    - Batch Booking [0,1] : BatchBookingIndicator
    - Number Of Transactions [0,1] : Max15NumericText
    - Control Sum [0,1] : DecimalNumber
    - Payment Type Information [0,1] : PaymentTypeInformation19
    - Requested Execution Date [1,1] : DateAndDateTimeChoice
    - Pooling Adjustment Date [0,1] : ISODate
    - Debtor [1,1] : PartyIdentification43
    - Debtor Account [1,1] : CashAccount24
    - Debtor Agent [1,1] : BranchAndFinancialInstitutionIdentification5
    - Debtor Agent Account [0,1] : CashAccount24
    - Instruction For Debtor Agent [0,1] : Max140Text
    - Ultimate Debtor [0,1] : PartyIdentification43
    - Charge Bearer [0,1] : ChargeBearerType1Code
    - Charges Account [0,1] : CashAccount24
    - Charges Account Agent [0,1] : BranchAndFinancialInstitutionIdentification...
    - Credit Transfer Transaction Information [1,*] : CreditTransfe...
      - Payment Identification [1,1] : PaymentIdentificatio...
      - Payment Type Information [0,1] : PaymentType...
      - Amount [1,1] : AmountType4Choice
      - Exchange Rate Information [0,1] : ExchangeRa...
      - Charge Bearer [0,1] : ChargeBearerType1Code
      - Cheque Instruction [0,1] : Cheque7
      - Ultimate Debtor [0,1] : PartyIdentification43
      - Intermediary Agent 1 [0,1] : BranchAndFinancialInstitutionIdentification5
      - Intermediary Agent 1 Account [0,1] : CashAccount24

Selectively reuse existing ISO 20022 components & elements => Custom resource components

- Business Areas
  - Account Management - Latest version - master(acmt)
  - APIs(pain)
    - Au Npp Api Resources (pain.a00.000.01)
      - Account Alias [1,1] : AccountAliasResource
      - Customer Credit Transfer Initiation [1,1] : CustomerCreditTransferInitiationResource
        - Instruction Identification [1,1] : Max35Text
        - End To End Identification [1,1] : Max35Text
        - Creation Date Time [1,1] : ISODateTime
        - Initiating Party Name [1,1] : Max140Text
        - Initiating Party BIC [0,1] : AnyBICIdentifier
        - Instruction Priority [0,1] : Priority2Code
        - Service Level [1,1] : Max35Text
        - Local Instrument [1,1] : ExternalLocalInstrument1Code
        - Category Purpose [1,1] : ExternalCategoryPurpose1Code
        - Requested Execution Date [1,1] : ISODate
        - Debtor Name [1,1] : Max140Text
        - Debtor Alias Type [0,1] : ExternaAliasType1Code
        - Debtor Alias Value [0,1] : Max2048Text
        - Debtor Account Identification [0,1] : Max34Text
        - Debtor Account Type [0,1] : ExternalAccountIdentification1Code
        - Debtor Agent BIC [0,1] : AnyBICIdentifier
        - Instructed Amount [1,1] : ActiveOrHistoricCurrencyAndAmount
        - Creditor Name [1,1] : Max140Text
        - Creditor Account Identification [1,1] : Max34Text
        - Creditor Account Type [1,1] : ExternalAccountIdentification1Code
        - Remiitance Referred Document Type [0,1] : Max35Text
        - Remittance Referred Document Number [0,1] : Max35Text
        - Remittance Referred Related Date [0,1] : ISODate
        - Remittance Information Unstructured [0,2] : Max140Text
      - Customer Payment Status Report [1,1] : CustomerPaymentStatusReportResource

No need to use the entire structure of the source component => No deep nesting like in message design

Define the API request/responses based on the Resources

- 🔒 PSD2 API RESOURCES (pain.a00.000.01)
  - 🔵 Payment Obligation [1,1] : PaymentObligationResource1
  - 🔵 Account [1,*] : CashAccountResource1
    - 🔵 Identification [1,1] : AccountIdentificationAndName5
      - 🔒 Identification [1,1] : AccountIdentification4Choice
        - 🔵 IBAN [1,1] : IBAN2007Identifier 🟥
        - 🔵 Other [1,1] : GenericAccountIdentification1
    - 🔵 Name [0,1] : Max35Text 🟥
    - 🔒 Account Servicer [0,1] : FinancialInstitutionIdentification7Choice
      - 🔵 Name And Address [1,1] : NameAndAddress5
      - 🔵 BICFI [1,1] : BICFIIdentifier
      - 🔒 Clearing System Member Identification [1,1] : ClearingSystemMemberIdentificationChoice
      - 🔵 Proprietary Identification [1,1] : SimpleIdentificationInformation4
  - 🔵 Remittance Information [0,1] : RemittanceResource1
  - 🔵 Payment Instruction [1,*] : PaymentInstructionResource1
  - 🔵 Remittance Location [0,1] : RemittanceLocationResource1
  - 🔵 Cash Account Balance Report [0,*] : CashAccountBalanceReportResource1
    - 🔵 Account Id [1,1] : string
    - 🔵 Report Time Stamp [1,1] : dateTime
    - 🔵 Balances [1,1] : CashBalanceResource1

- ◢ 🔒 Get Accounts (pain.a01.001.01)
  - 🔵 Request [1,1] : GetAccountsRequest
  - ◢ 🔵 Response [1,1] : AccountsList
    - ◢ 🔵 Account [1,*] : AccountResource
      - 🔵 Identification [1,1] : Max35Text
      - 🔵 IBAN [0,1] : IBAN2007Identifier 🟥
      - 🔵 Name [1,1] : Max35Text 🟥
      - 🔵 Details [0,1] : Max140Text
      - 🔵 Linked Account [0,1] : Max35Text
      - ▷ 🔒 Usage [0,1] : AccountUsage
      - ▷ 🔒 Type [1,1] : CashAccountType6Code
      - ▷ 🔒 Currency [0,*] : CurrencyCode
      - ▷ 🔵 Balances [0,1] : BalancesList
      - 🔵 PSU Status [0,1] : Max35Text
      - ▷ 🔵 Hal Links [1,1] : AccountLinks

> Pick and choose the elements from the Resources to compose your API calls

> No need to reuse the entire structure of the Resource => No deep nesting like in message design

> Only use the elements you need for the API call => Custom made calls

> Add technical elements where appropriate

SWIFT

POC – MyStandards also for API creation and documentation

Payment initiation request

Tag: Payment Initiation Service (PIS)

📄 general_introduction.pdf   📄 operational_rules.pdf   📄 implementation_guidelines.pdf   📄 V1_3Errata_20181220.pdf

Description   **Input Format**   Output Formats

`post` /v1/{payment-service}/{payment-product}

Name	Min	Max	Restrictions
⚙ Body			
⌄ ⅋ request_body	0	1	⚠
⌄ O paymentInitiationSct_json	1	1	⚠
O endToEndIdentification	0	1	
› O debtorAccount	0	1	[!]⚠
› O instructedAmount	1	1	
› O creditorAccount	0	1	
O creditorAgent	0	1	
O creditorName	0	1	◇[!]
› O creditorAddress	1	1	
O remittanceInformationUnstructured	0	1	
› O paymentInitiationSctInst_json	1	1	
› O paymentInitiationTarget2_json	1	1	
› O paymentInitiationCrossBorder_json	1	1	
› O periodicPaymentInitiationSct_json	1	1	

debtorAccount

Description

Reference to an account by either

- IBAN, of a payment accounts, or
- BBAN, for payment accounts if there is no IBAN, or
- the Primary Account Number (PAN) of a card, can be tokenised by the ASPSP due to PCI DSS requirements, or
- the Primary Account Number (PAN) of a card in a masked form, or
- an alias to access a payment account via a registered mobile phone number (MSISDN).

Type

accountReference (object)

feedback

SWIFT

Search

Aa ☀ 💬 **SAVE** ⌄

Schemas ⌃

SCHEMA camt.a01.001.04
SCHEMA camt.a01.002.03
SCHEMA camt.a02.002.04
SCHEMA camt.a04.002.04
SCHEMA camt.a05.002.04
SCHEMA camt.a06.001.03
SCHEMA camt.a06.002.03
SCHEMA camt.a07.001.03
SCHEMA camt.a07.002.03
SCHEMA PaymentStatusRequest
SCHEMA AnyBICDec2014Identifier
SCHEMA BusinessService2Code
SCHEMA Max16Text
SCHEMA UUIDv4Identifier
SCHEMA CancellationRequest2

```yaml
19    schemas:
20      camt.a01.001.04:
21        type: object
22        properties:
23          payment_status_request:
24            $ref: '#/components/schemas/PaymentStatusRequest'
25        additionalProperties: false
26        description: 'ISO 20022 JSON Schema PaymentStatusRequest (camt.a01.001
            .04) Generated by SWIFT Standards 2019-06-20 02:05:03'
27      camt.a01.002.03:
28        type: object
29        properties:
30          payment_status_response:
31            $ref: '#/components/schemas/PaymentStatusResponse'
32        additionalProperties: false
33        description: 'ISO 20022 JSON Schema PaymentStatusResponse (camt.a01.002
            .03) Generated by SWIFT Standards 2019-06-20 02:05:03'
34      camt.a02.002.04:
35        type: object
36        properties:
37          payment_transaction_details_response:
38            $ref: '#/components/schemas/PaymentTransactionDetailsResponse'
39        additionalProperties: false
40        description: 'ISO 20022 JSON Schema PaymentTransactionDetailsResponse
            (camt.a02.002.04) Generated by SWIFT Standards 2019-06-28 03:57:40'
```

Examples – APAC & Global

Standardised APIs Spec for Open Banking (PSD2, UK OB)

SWIFT creates financial sector API blueprint

Cooperative expedites standardisation to foster financial industry API adoption

Brussels, 16 October 2018

SWIFT has today published a blueprint for common API standards following collaboration with European banking standards bodies, STET and Berlin Group NextGenPSD2 – who together represent many of the region's banks and payment service providers.

As pressure from regulators and customers shift banking towards more open access to financial services, SWIFT is playing a lead role in unlocking the potential of API technology by providing the neutral collaboration platform to develop the common data standards the industry needs.

SWIFT's white paper, *Towards a global platform for the Financial Services API economy*, published today, concludes that a successful transition to an API-based financial ecosystem is only possible if financial standards bodies converge towards a shared business standardisation methodology.

Regulators around the world have identified the need for interoperability among financial institutions as they move towards a more open banking model. SWIFT, STET and Berlin Group NextGenPSD2 are at the centre of efforts to avoid fragmentation, isolation, and the needless complexities that will frustrate attempts to build the value-added services that customers want.

SWIFT is working to minimise inefficiencies caused by differing regulatory specifications that could limit opportunities for common API frameworks across different regions and potentially require different solutions for every market. The cooperative has lent its long-standing expertise in standards, specifically ISO 20022 – the standard for electronic data interchange between financial institutions – to work alongside STET and Berlin Group NextGenPSD2 in Europe to define the building blocks for the new services that will spring from the new API economy.

Industry standard API for HK Open Banking

SWIFT and HSBC to define industry standard for APIs in Hong Kong

PAYMENTS, 3 OCTOBER 2019

The new standard will ensure higher levels of interoperability and improve customer experience

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Press Releases

31 Jul 2019

Open API Framework for the Banking Sector: One year on

The Hong Kong Monetary Authority (HKMA) announced today (31 July 2019) the implementation progress and the future plans for the Open Application Programming Interface (API) Framework for the Hong Kong Banking Sector (the Framework).

The HKMA introduced the Framework in July 2018, which aims to facilitate the development and wider adoption of APIs by the banking sector. The Framework adopts a four-phase[1] implementation approach. Since the launch of Phase I in January 2019 as scheduled, the 20 participating retail banks have made available more than 500 Open APIs, offering access to information of a wide range of banking products and services. Websites and mobile apps are increasingly making use of these Open APIs in the provision of various services such as foreign exchange rate information, deposit rate and loan product comparison.

The 20 participating retail banks will further launch Phase II Open APIs by end of October 2019 as scheduled[2] to process applications for banking products and services. However, as in Phase I, it may take time for new applications using these Open APIs to gradually emerge in the market, depending on the complexity of the API design of individual banks.

Since Phase III and IV Open APIs involve access to customer data and processing of transactions, their implementations are more complex and require stronger control measures. Having discussed with the relevant stakeholders, and taken into account the experience in the implementation of Phase I and II as well as relevant international practices, the HKMA considers it desirable to define a more detailed set of standards for Phase III and IV Open APIs to facilitate secure and efficient implementation across the industry before setting out a concrete implementation timetable. By standardising data definitions and transfer processes, accurate data aggregation can be achieved and customer trust in using the related services can be enhanced. In this connection, the HKMA will work with the industry on details of API standardisation in the next few months with a view to publishing a set of technical standards in 2020.

HK Open Banking – ISO 20022 API development support for the community
Example - Direct Debit Authorisation Registration (with HSBC)

Off-us

Consumer (Dbtr) — Via Mobile App/browser — Merchant (Cdtr) — DDA API — Payee Bank (CdtrAgt)

FPS ISO pain.012   FPS ISO pain.009

Payer Bank (DbtrAgt)

Notification and/or OTP (optional)

On-us

Consumer (Dbtr) — Via Mobile App/browser — Merchant (Cdtr) — DDA API — Payee Bank (CdtrAgt) = Payer Bank (DbtrAgt)

Notification and/or OTP (optional)
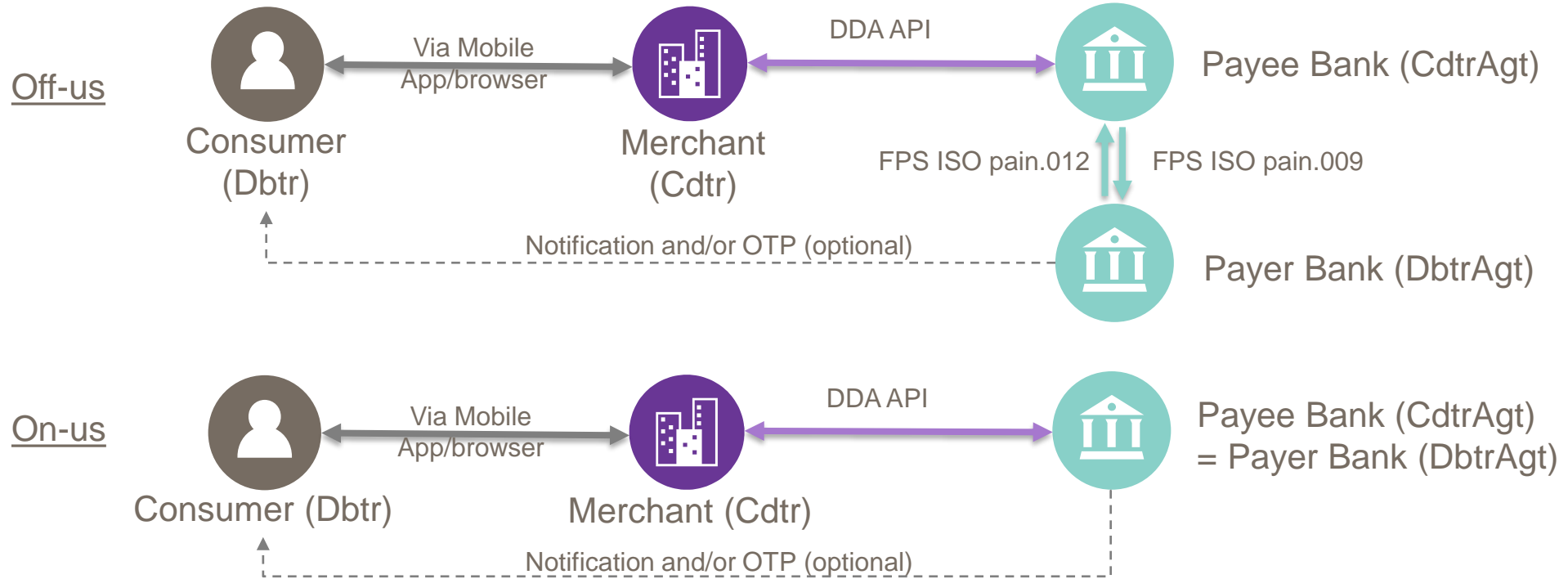
- This use case is equivalent to the DDMP (paper based DD mandate) business scenario
- Payee Bank has to signed agreement upfront with merchant to use this service.
- Merchant will usually get consent from its consumer on its website/app to accept the disclaimer before proceeding the registration
- One time password (OTP) from payer bank to consumer (on-us: payee bank = payer bank) is optional

AU NPP API Framework

NPP API Framework v2.0

May 22, 2019

NPP API Framework v2.0

A new version of the NPP API Framework, initially launched in **September 2018**, is now available.

NPP Australia's General Manager of Technology and Operations, Bob Masina, said the updated Framework now includes sample APIs developed in consultation with **NPP participating institutions** to enable a consistent approach to cancelling and returning payments.

"These updated sample APIs are about enabling participating organisations to provide their customers with predictable experiences when it comes to cancelling and returning their payments. They are also about providing the ecosystem what it needs to consider future capabilities of the Platform," he said.

When it first launched in September 2018, CEO of NPP Australia, Adrian Lovney, said the NPP API Framework would constantly evolve to ensure third party service providers, software developers and participating financial institutions could support consistent NPP payment experiences, regardless of the type of innovation being developed.

"What makes the NPP stand apart from other real-time payments platforms around the world is that it has been designed to be inclusive and 'open access'. It's important that companies and innovators can use its world leading capabilities in a way that promotes usability and growth across the entire NPP ecosystem," Adrian said.

To download a copy of the NPP API Framework v2.0, click here.

v1.0

Live	Live
Get Account Service By Alias	Submit Payment

Live
Get Payment Status

v2.0

Live	Live
Payment Event Notification (Push)	Payment Event Details

Live	Live
Cancel Payment	Return Payment

ISO 20022 and APIs for HKEX Stock Connect's DLT platform

HKEX
香 港 交 易 所

The Problem

- Same-day settlement risk
- Single-sided confirmations open up risk for foreign Asset managers
- Manual, costly and time-consuming reconciliations

The solution

- Post trade, pre-settlement DLT platform streamlining the flows
- Adoption of ISO 20022 for DLT and messaging
- Platform can be accessed both with messages or APIs
- Benefits
  - Visibility across the chain
  - Real-time post-trade status updates
  - Avoid failed settlements and timely reconciliations
  - Ability to execute FX earlier for tighter spreads

Use of ISO 20022

- DLT elements are aligned with ISO 20022
- ISO 20022 message templates use the ISO-aligned elements in the DLT
- APIs using the same ISO-aligned business elements

SWIFT

Why SWIFT?

SWIFTs approach to developing API products, for its own content as well as community content, is founded on three pillars

Modelling	Publishing	Consumption
Collaborative process of converting business process into technical specifications to design APIs, and finalize as API contracts.	Publishing API contracts on the developer portal for the Community to self serve what is available, and can test using a sandbox	Enabling seamless connectivity to consume APIs, bringing content providers and consumers together

SWIFT Content

Community Content

SWIFT Collaborative modeling tools and methodologies, powered by SwaggerHub	SWIFT Developer Portal with Sandboxes and SWIFT API Catalogue	SWIFT API Gateway, with SWIFT content APIs and Community content APIs, with consumption options

SWIFT enables harmonized API contract modelling for our own content, as well as for community content…
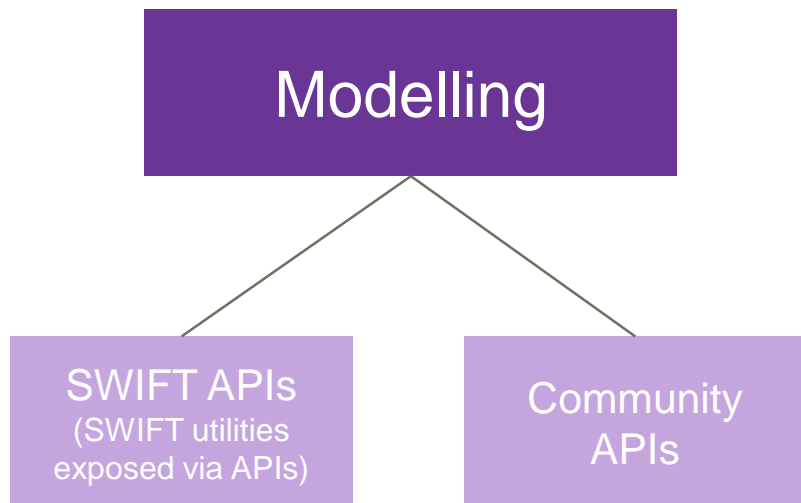
Illustrative Examples	SWIFT APIs	Community APIs
GPI (Get Transaction Details)	🟩	
SWIFTRef	🟩	
NAV (Net Asset Value)		🟩
GTV (Global treasury Viewer)		🟩

Community Use case details in slide 14 onwards

…and follows a collaborative modelling process, powered by SwaggerHub

Business process definition	Conversion to API contract	Collaborate

Business Process Editor

ISO 20022 Repository

Standards Editor

JSON Schemas

Swaggerhub

Open API Specification
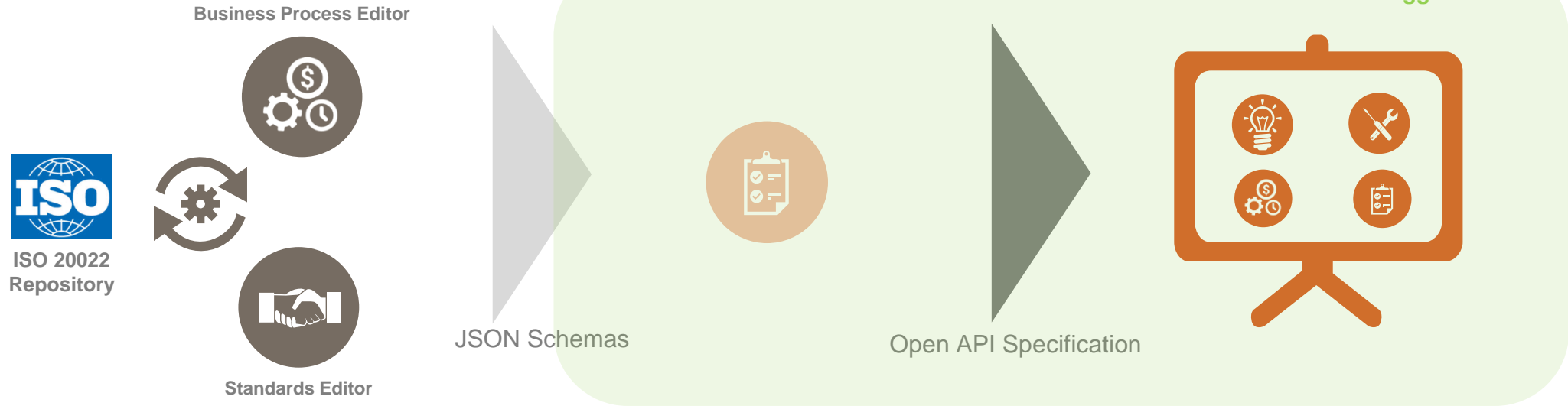
- Business Transactions
- Resources (Message Components)
- ISO 20022 registration process and governance

- API specific information (request parameters, endpoints, URLs,)
- Generic APIs
- OAS 3.0 files
- API registration by SWIFT or ISO 20022

- Enrich with error handling, authentication flows
- Create sandbox
- Create environment for review/comments
- SWIFT governance

SWIFT enables publishing of APIs via our own developer portal, as well as provides the option to publish on the customers developer portal

```
                    ┌──────────────────────────┐
                    │        Publishing         │
                    └──────────────────────────┘
                        /                  \
            ┌──────────────┐        ┌──────────────┐
            │    SWIFT     │        │  Community   │
            │   Content    │        │   Content    │
            └──────────────┘        └──────────────┘

              SWIFT                    Customer
          Developer Portal         Developer Portal
                                 (No SWIFT Developer Portal)
```
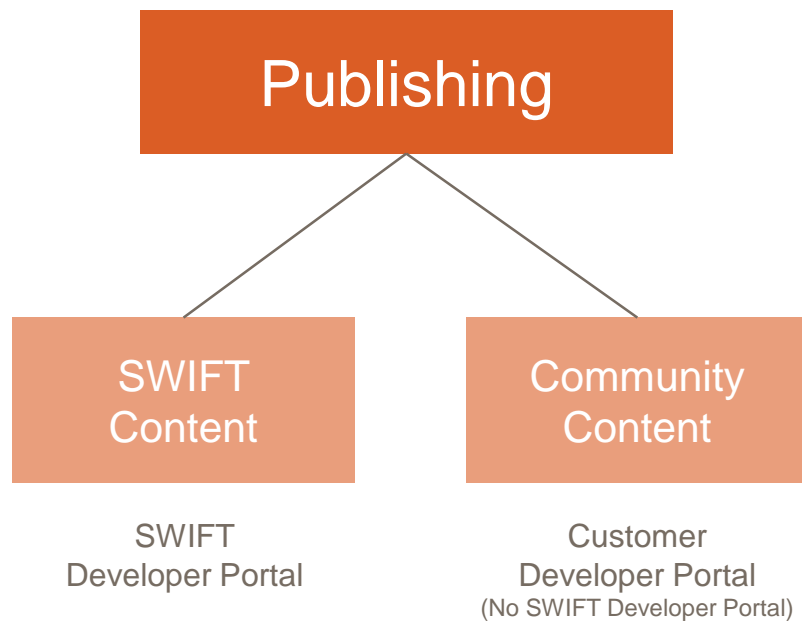
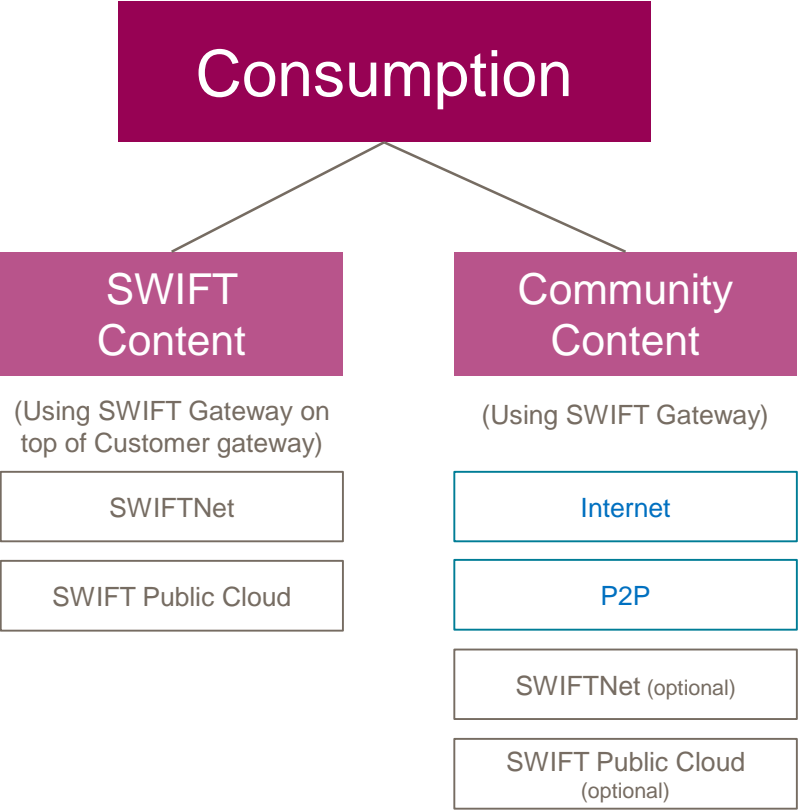| Illustrative Examples	SWIFT Portal	Customer Portal
GPI (Get Transaction Details)	🟩	
SWIFTRef	🟩	
NAV (Net Asset Value)		🟩
GTV (Global treasury Viewer)		🟩

Community Use case details in slide 14 onwards

Our developer portal provides easy access to SWIFT content, along with Sandboxes to test and experiment

Visit https://developer.swift.com
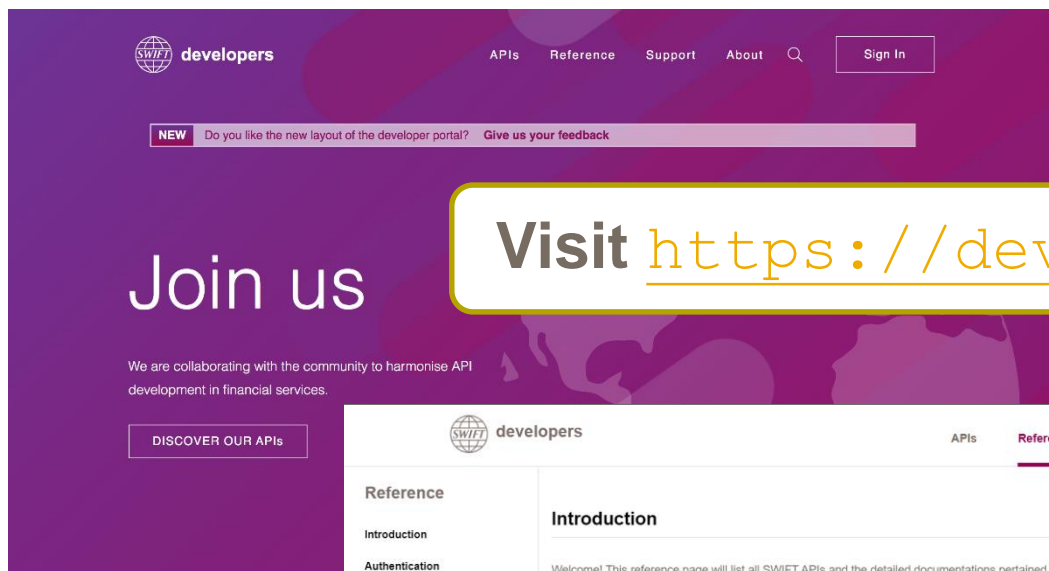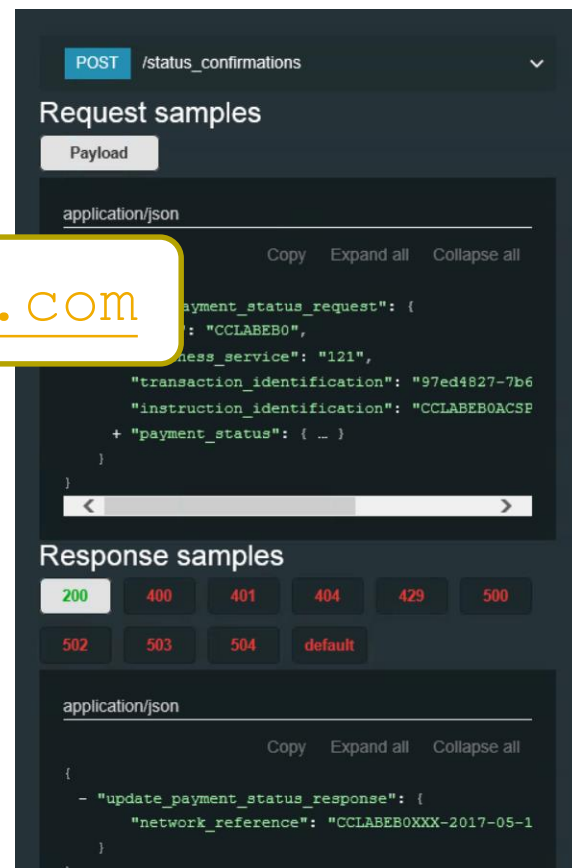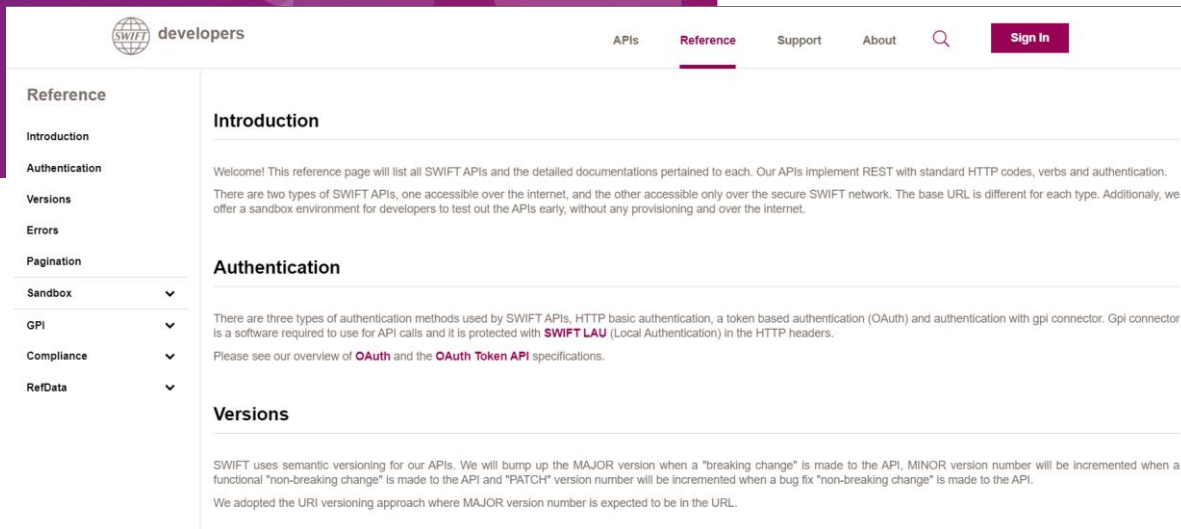
SWIFT enables API consumption via multiple channels, which may vary based on the use case

Consumption

SWIFT Content
(Using SWIFT Gateway on top of Customer gateway)

- SWIFTNet
- SWIFT Public Cloud

Community Content
(Using SWIFT Gateway)

- Internet
- P2P
- SWIFTNet (optional)
- SWIFT Public Cloud (optional)

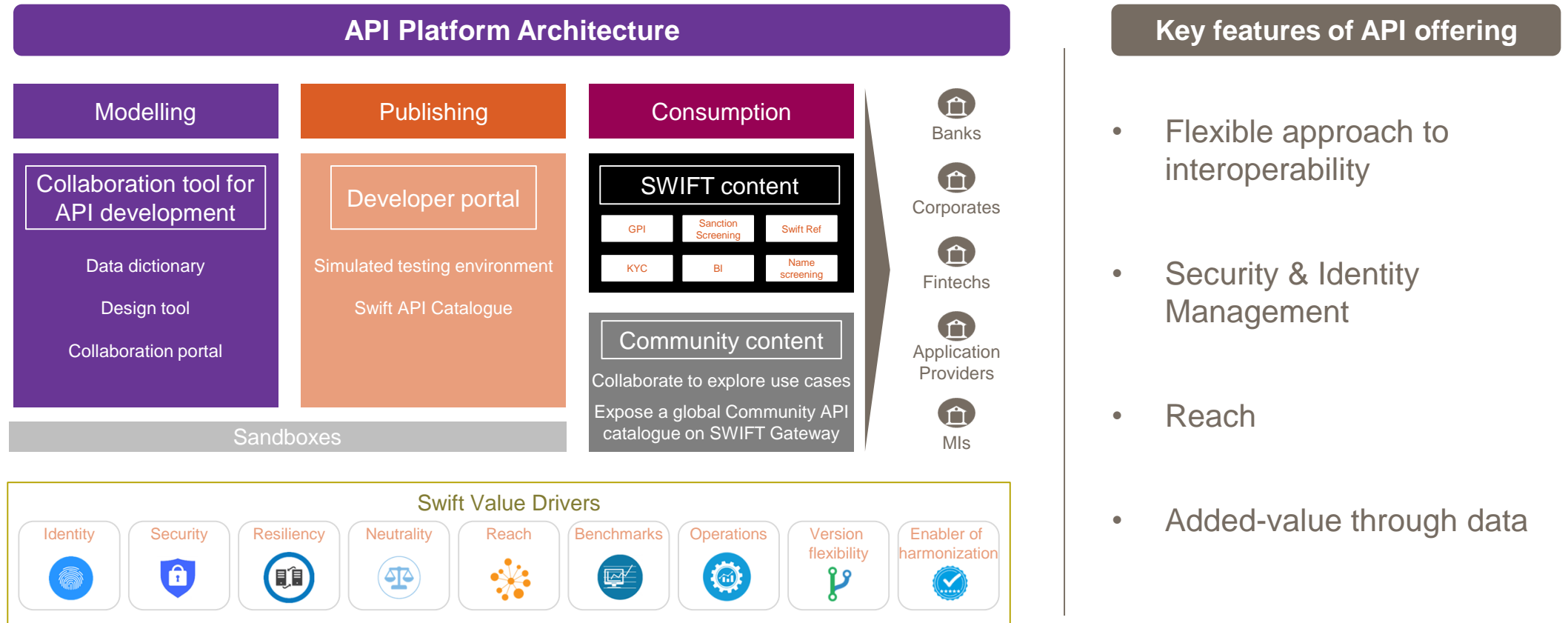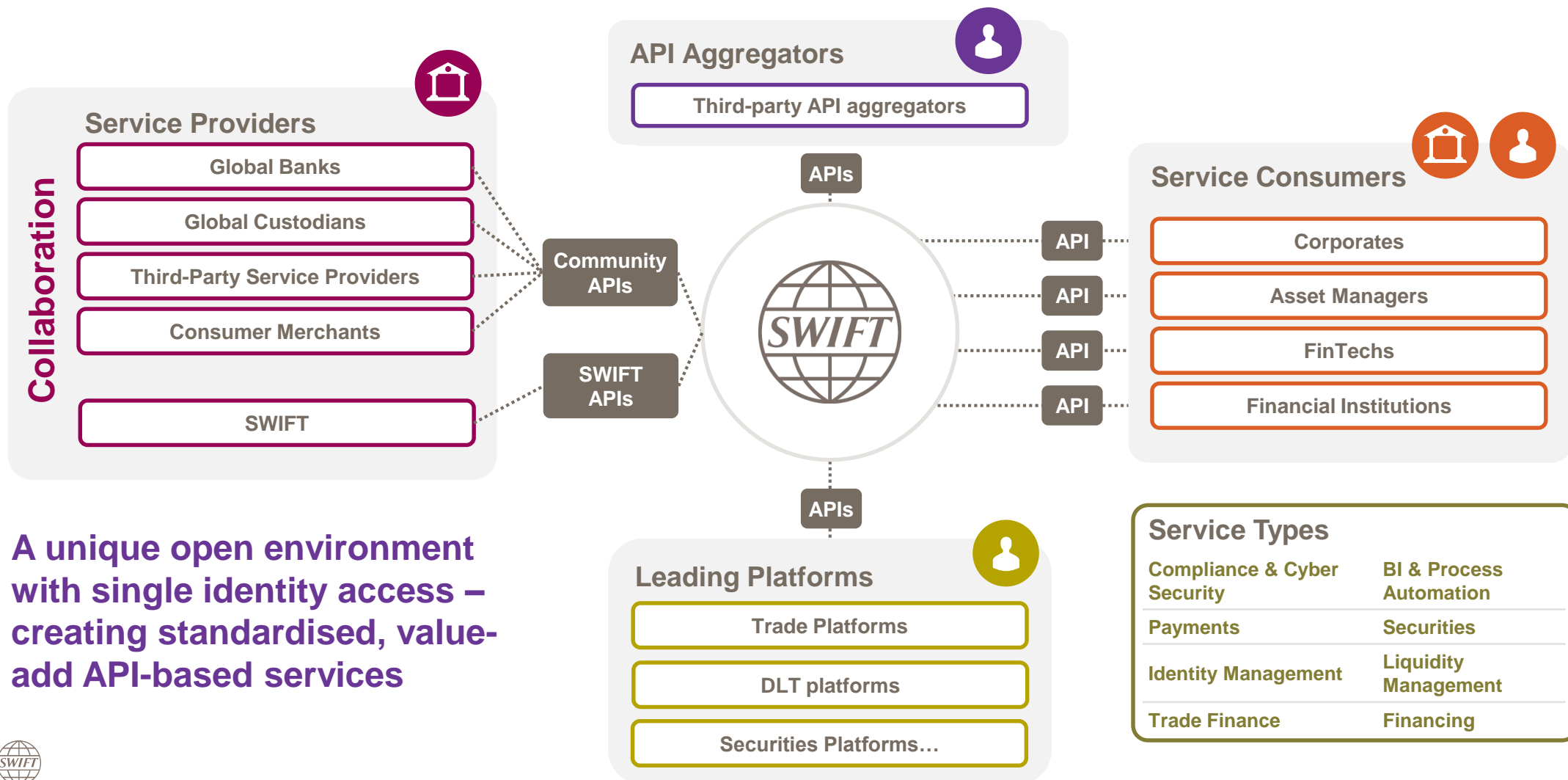| Illustrative Examples	SWIFT Content		Community Content			
	SWIFTNet	SWIFT Public Cloud	Internet	P2P	SWIFTNet	SWIFT Public Cloud
GPI (Get Transaction Details)	■					
SWIFTRef		■				
NAV (Net Asset Value)			■	And / Or	And / Or	And / Or
GTV (Global Treasury Viewer)			■	And / Or	And / Or	And / Or

Community Use case details in slide 14 onwards

SWIFT content can be consumed via SWIFTNet as well as SWIFT Public cloud via internet, with an additional option of P2P or Internet based consumption for Community content
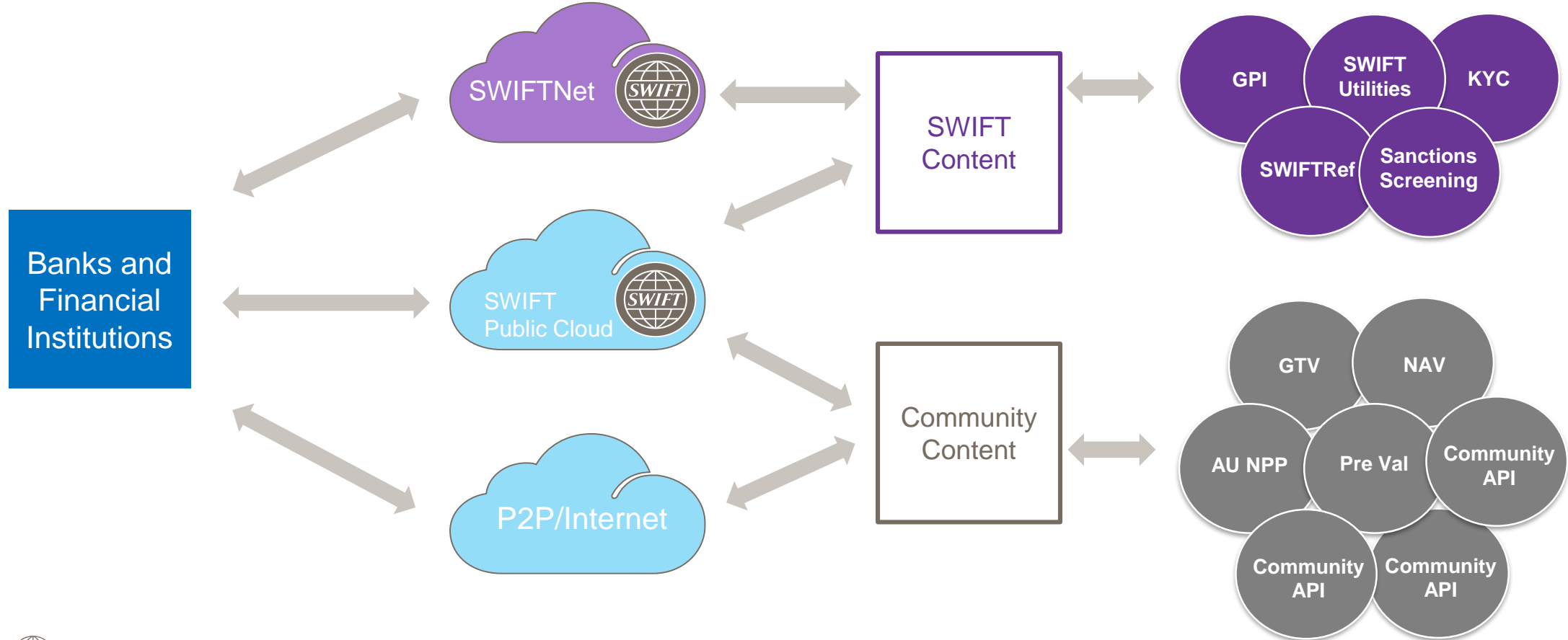
SWIFT has grown a significant API capability rooted in our core strengths, and emphasizes our role as a "utility" for our Community

API Platform Architecture

Modelling

Collaboration tool for API development

Data dictionary

Design tool

Collaboration portal

Publishing

Developer portal

Simulated testing environment

Swift API Catalogue

Consumption

SWIFT content

| GPI | Sanction Screening | Swift Ref |
| KYC | BI | Name screening |

Community content

Collaborate to explore use cases

Expose a global Community API catalogue on SWIFT Gateway

Sandboxes

- Banks
- Corporates
- Fintechs
- Application Providers
- MIs

Swift Value Drivers

| Identity | Security | Resiliency | Neutrality | Reach | Benchmarks | Operations | Version flexibility | Enabler of harmonization |

Key features of API offering

- Flexible approach to interoperability

- Security & Identity Management

- Reach

- Added-value through data

SWIFT two-sided platform – vision state

Collaboration

Service Providers
- Global Banks
- Global Custodians
- Third-Party Service Providers
- Consumer Merchants
- SWIFT

Community APIs

SWIFT APIs

API Aggregators
- Third-party API aggregators

APIs

SWIFT

API
API
API
API

Service Consumers
- Corporates
- Asset Managers
- FinTechs
- Financial Institutions

APIs

Leading Platforms
- Trade Platforms
- DLT platforms
- Securities Platforms…

Service Types

Compliance & Cyber Security	BI & Process Automation
Payments	Securities
Identity Management	Liquidity Management
Trade Finance	Financing

A unique open environment with single identity access – creating standardised, value-add API-based services

Examples of API business use cases for Payments and Securities

SWIFT Products
(consumption over `SWIFTNet` or `Internet`)

Live	**Live**
Payment tracking	Cancel Payment
Live	**Live**
KYC	SWIFTRef
Live	
Sanctions screening	
Development	**Development**
Case Resolution	Banking Analytics

Community APIs
(consumption over `SWIFTNet`)

Development	**Development**
Trade status reporting	Position/holdings status
Development	**Development**
Net asset value (NAV)	Beneficiary pre-validation
Development	**Development**
Corporate actions	Syndicated loans
Under consideration	**Under consideration**
Transaction initiation	Payment request

Community Specification
(Standards – non SWIFTNet)

Development
Pay later
Development
Pre-authorisation
Development Support
Open Banking (EU, HK,…)

Community APIs

Use case: **Pay Later API Standard**

Pay Later is a standardised API solution that supports banks' transition into the world of digital platforms
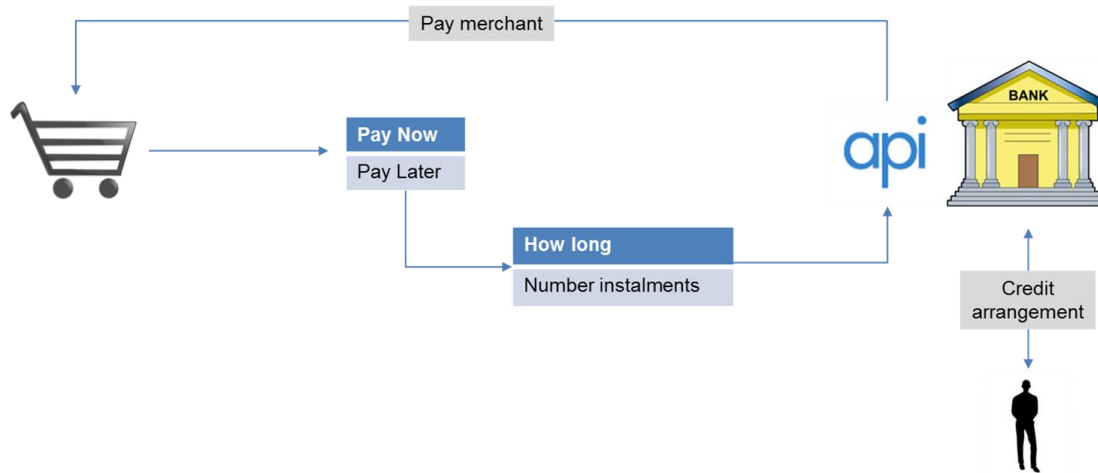
By selecting Pay Later at the point of purchase, customers are provided with available loans from their banks

Community APIs are standardised solutions developed by a cross-section of players to solve industry challenges

Banks, vendors and merchants collaborated to develop the Pay Later API – a standard that FIs can easily adopt to move in the e-commerce space

SWIFT APIs (Demo)

SWIFT is currently creating a range of API services - making initiating, translating, validating and tracking payments all possible via API calls

SENDER BANK

RECEIVER BANK

APIs flow when making a payment

TRANSFER

Reference Data API
Validate payment data, beneficiary account, currency codes, amount data, dates and more with SWIFTRef APIs

Sanctions Screening API
Validate payment data against sanctions list, using financial crime compliance APIs

Pre-validation API
Ensure beneficiary account exists, matches with the beneficiary name and is ready to receive funds

NOT AVAILABLE YET

ISO 20022 Translation APIs
Accelerate the ISO 20022 readiness and transform cross border payment messages to ISO 20022

NOT AVAILABLE YET

SWIFT messages via one single API
Send and receive messages to SWIFT network by using a single API

GPI Tracker
Track payments end-to-end in real-time with APIs

SWIFT

What next?

Develop your capability to consume APIs

Explore our Developer Portal

Consume our live SWIFT APIs

Collaborate to create new Community APIs

SWIFT

1. Standardising APIs

?

Why bother?

Standardisation is a fundamental requirement for a prosperous API economy in financial services to take root

!

What's the challenge?

APIs have exploded in recent years with firms developing their own propriety data, business and identity specs

Why SWIFT?

We are leveraging our standards expertise to model, maintain and publish common API specs

What's the benefit?

Common standards will reduce API usage costs, eliminate operational inefficiencies and lower entry barriers

SWIFT is collaborating to harmonise API development in financial services

2. Helping FIs to effectively consume APIs

?

Why bother?

Many firms are not yet capable of consuming API-based services – let alone developing their own

!

What's the challenge?

Most FIs run legacy back-office systems that make API adoption challenging

Why SWIFT?

SWIFT has the experience and expertise to help firms accelerate their API capacity to consume APIs

What's the benefit?

All FIs need to be able to effectively consume APIs for a thriving economy to develop in financial services

We can help firms develop their capability to consume API-based services

3. Opening SWIFT up to trusted developers to offer new services

Why bother?

It will provoke competitive innovation and engineer a revolution in the SWIFT customer experience

What's the challenge?

Many closed API platforms exist, offering propriety services to small user bases – the challenge is to unite all players on a single platform

Why SWIFT?

Developing and consuming API services on the SWIFT platform enables users do business with 11,000+ FIs worldwide

What's the benefit?

Our members and trusted third-parties can leverage our platform to offer added-value API-based services to the community

Opening the SWIFT platform up to trusted developers will deliver the next generation of API-based services on our platform

A closed environment

FIs have traditionally operated like castles protecting their territory, with moats to dissuade outsiders

As such, an open platform economy has not flourished in financial services – *until now*

SWIFT

Powering open banking

Closed banking: Bank owns the customer relationship

Open Banking: Bank or third-party owns the customer relationship
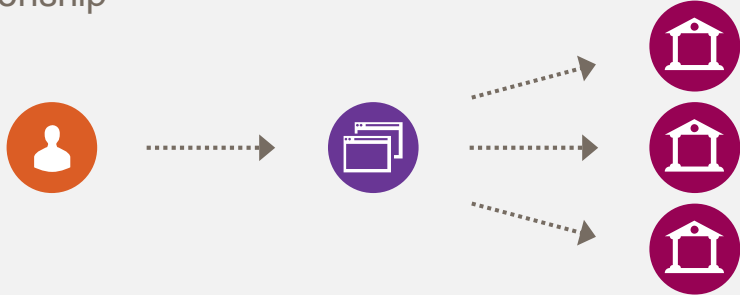
Regulators have seen the power of APIs to open up retail banking markets and spur competition

Pioneered in the EU and UK, Open Banking regulations are now a global phenomenon

SWIFT

Accelerating digital transformation
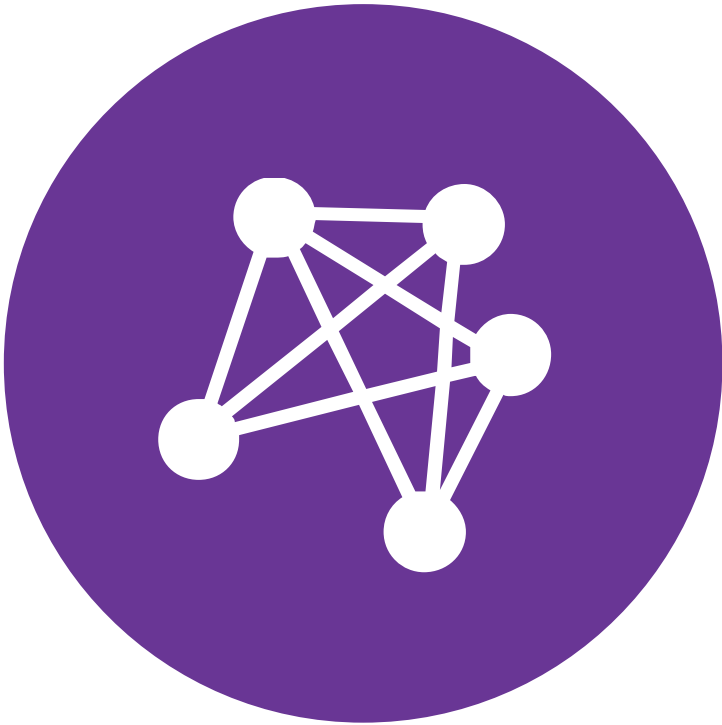
It's not just compliance – FIs recognise the power of APIs to transform their business models and services

They see APIs as a safe and secure way to stay competitive and outsource non-core services, operations and infrastructures

Growing API economy in financial services

2.2Tn The estimated global market value of the API economy in 2018

3x projected growth in number of public APIs in next 12 months

13x growth in number of public APIs in financial services over the last 10 years, since first PayPal APIs

~75% of global banks have launched public APIs and open banking payments projects

The API economy has grown exponentially in industries like travel, media and ecommerce

Now APIs are experiencing such growth in financial services

Source: Gartner

SWIFT

Our unique expertise

Unparalleled reach

Extensive compliance expertise

Exceptional security & reliability

Unique expertise in data standards

SWIFT is the leader in secure, compliant and standardised global financial communications

We are uniquely positioned to help the community overcome the challenges and seize the this opportunity
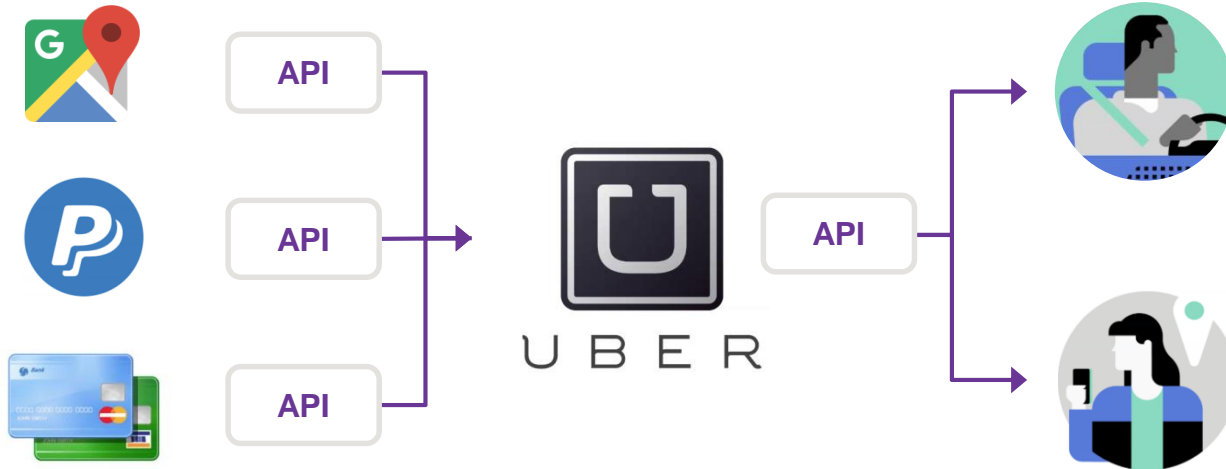
The global context

Transforming global business

qover	Azure	opodo
PayPal	NETFLIX	Google Maps
aws	Instagram	skyscanner
stripe	twilio	蚂蚁金服 ANT FINANCIAL

APIs have already transformed global business

They give firms and consumers flexible, real-time access to data and services – whenever and wherever they want
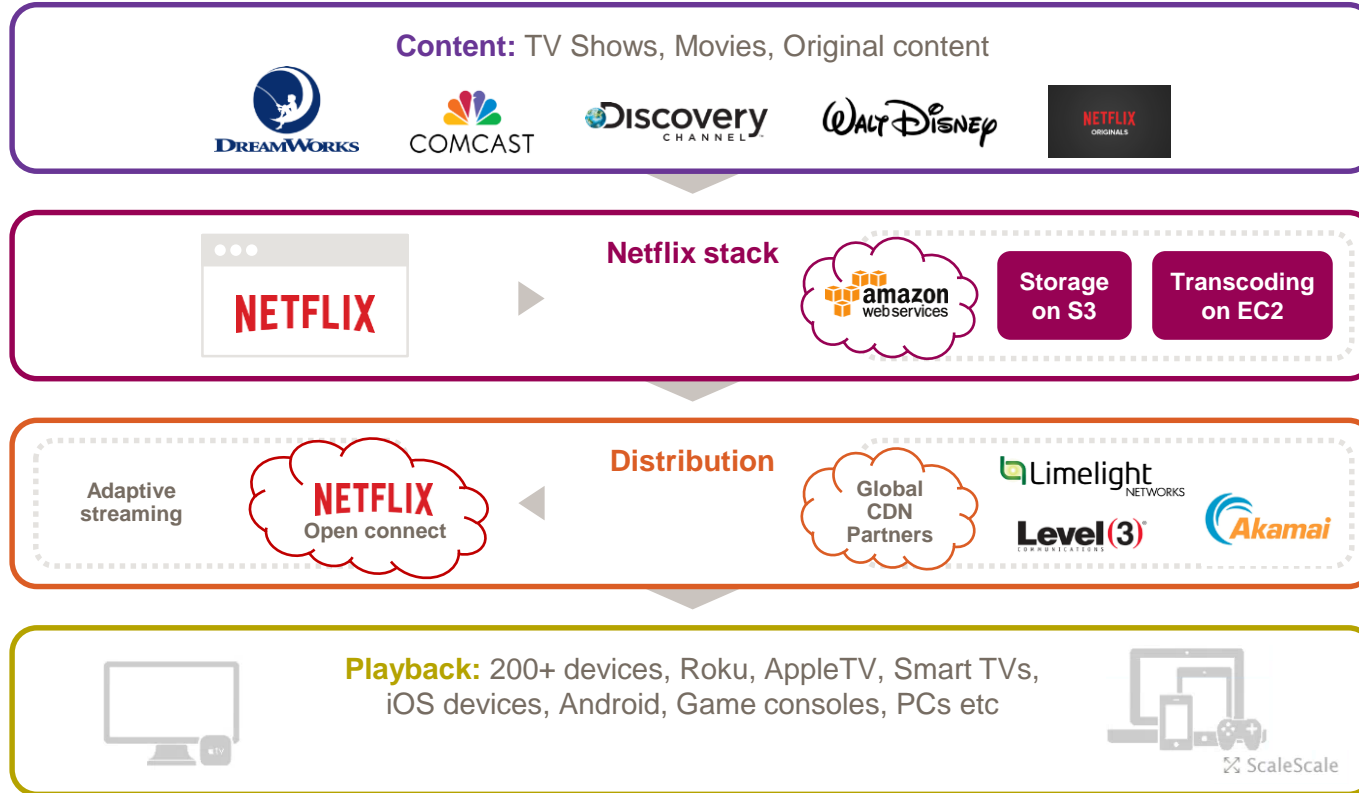
SWIFT

The platform economy

Use case: **The Uber Model**

By connecting to other platforms via APIs, Uber focuses on their core business – connecting riders and drivers to deliver a seamless customer experience

Firms use APIs to connect to existing platforms and focus on their core offer

They don't need to develop and maintain all the infrastructure

Cultivating ecosystems

Use case: **Netflix tech stack**

Content: TV Shows, Movies, Original content

DREAMWORKS · COMCAST · Discovery CHANNEL · WALT DISNEY · NETFLIX ORIGINALS

Netflix stack

NETFLIX ▶ amazon web services · Storage on S3 · Transcoding on EC2

Distribution

Adaptive streaming · NETFLIX Open connect ◀ · Global CDN Partners · Limelight NETWORKS · Level (3) COMMUNICATIONS · Akamai

Playback: 200+ devices, Roku, AppleTV, Smart TVs, iOS devices, Android, Game consoles, PCs etc

✕ ScaleScale

Platforms stimulate whole ecosystems around them

Service providers leverage the infrastructure to offer added value to end-customers

SWIFT

Source: ScaleScale.com

Two-sided platform ecosystems

All platforms are two-sided ecosystems

Service providers exploit the the infrastructure and reach a wide pool of end-customers

End-customers use the platform as a single point to access a range of services

SWIFT

Development of Alliance Access/Entry Portfolio – what's on the 2020/2021 horizon?

Goran Kostic, Head of Integration Portfolio, SWIFT

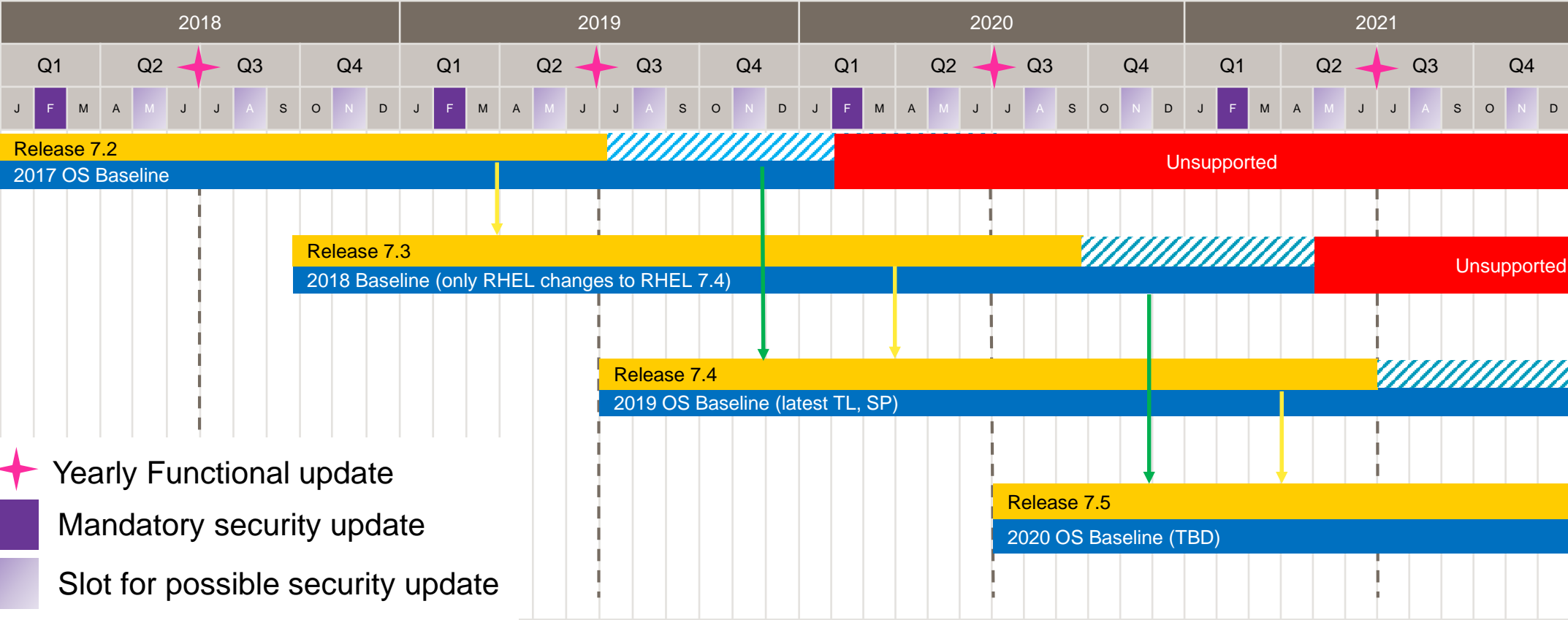**Philippe Detournay**, Head of Integration Services, APAC, SWIFT

Agenda

- **Release policy**
- **Roadmap**
- **7.2 EOS**
- **SWIFTNet Root Key Renewal**
- **7.4**
- **7.5 overview**
- **7.5 universal confirmations (+/- 5 slides)**
- **7.5 ISO (+/- 10 slides)**

SWIFT Alliance user community

Release Policy Roadmap: In Practice

	2018				2019				2020				2021			
	Q1	Q2 ✦	Q3	Q4	Q1	Q2 ✦	Q3	Q4	Q1	Q2 ✦	Q3	Q4	Q1	Q2 ✦	Q3	Q4

J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D

Release 7.2
2017 OS Baseline — Unsupported

Release 7.3
2018 Baseline (only RHEL changes to RHEL 7.4) — Unsupported

Release 7.4
2019 OS Baseline (latest TL, SP)

Release 7.5
2020 OS Baseline (TBD)

✦ Yearly Functional update

■ Mandatory security update

▨ Slot for possible security update

Primary upgrade path – upgrade to following release 24 month migration period →

February Security update Mandatory, Others Optional/Mandatory based on CVSS rating (7 or above) As per CSP controls, subject to changes

Secondary upgrade path - upgrade to N+2 release 7 month migration period →

SWIFT

Access roadmap 2019–2021

2019						2020												2021												

| Q3 | | | Q4 | | | Q1 | | | Q2 | | | Q3 | | | Q4 | | | Q1 | | | Q2 | | | Q3 | | | Q4 | | |

| J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D |

Access/Entry 7.2.70
MST2019
roll-up

Access/Entry 7.3.50
MST2019
roll-up

Access/Entry 7.4
MST2019
new features
roll-up

SNL/SAG 7.4

Access/Entry 7.3.xx
MST2020
roll-up

Access/Entry 7.4.xx
MST2020
roll-up

Access/Entry 7.5
MST2020
new features
roll-up

SNL/SAG 7.5

Access/Entry 7.4.xx
MST2021
roll-up

Access/Entry 7.5.xx
MST2021
roll-up

Access/Entry 7.6
MST2021
new features
roll-up

SNL/SAG 7.6

Tentative

End-of-Support
Release 7.2.xx

End-of-Support
Release 7.3.xx

SWIFT

7.2 end-of-support

- **7.2 EOS is end January 2020**

- **No security updates** for 7.2 anymore (as per release policy)

- **No extension** support for 7.2

- **Customers must plan an upgrade to 7.3 or 7.4** (both options are possible)

- **SR2019** is available for **7.2, 7.3 and 7.4**

- **Impact of missing the deadline**
  - Fail to comply with CSCF control 2.2
  - Unable to implement standards 2020
  - Still need to upgrade to 7.3 /7.4 before being able to upgrade to 7.5/7.6 for ISO 20022 migration and ESMIG
  - New SWIFTNet Root Key, must be implemented manual on Access/Entry

SWIFT

SWIFTNet CA Root Key Renewal

30 November 2019: Access Security Update delivers CA Root Key

2019				2020				2021	2022
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	...	...

From 14 September 2019 till end of February 2020

New CA Root Key is generated and can be downloaded for import in applications.
It is not yet used for signing any certificate.

14 March 2020

Root key **activation**. The new SWIFTNet CA root key will from now on be used to issue PKI certificates.

15 June 2022

CA Root key expires.

Any component that uses SWIFTNet PKI certificates is required to trust both the old and the new CA certificates

See tip 5022806

Alliance Access/Entry
Optional update 7.4

- **Standards Release 2019**
- **New security features**
- **Functional enhancements**
- **Maintenance fixes**
- **Installable on top of 7.2 and 7.3**
- **MQ 9.1 support**
- **Refreshed OS baseline**
    - AIX 7.2 TL3
    - RHEL 7.6
    - Solaris 11.4
    - Windows Server 2016
    - Windows 10 for the client side
- **ADK Components will need to be recompiled**

Supported until end January 2022

SWIFT

Alliance Access/Entry
Optional update 7.4: Details

- **Functional enhancements**
    - Easier cross-product Access Control management
    - Improvements of the command line based tools
    - Send *saa_supportinfo* via FileAct to SWIFT support
    - Optimizations for integration with Alliance Warehouse
- **New security features**
    - AES-GCM based authentication for IBM MQ-based flows
    - Local Authentication based on PKI certificates for IBM MQ-based flows
- **Replacement of the transformation tool for IPLA**
    - Validate compatibility of custom IPLA code with your provider
- **Use Connector for Sanctions 1.2.50, Connector for T2S 1.2.40**

Supported until end January 2022

Alliance Access: Supported releases and Upgrade paths

	Q2 2019			Q3 2019			Q4 2019				Q1 2020	
APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR

SR2019 cut-over

End-of-Support Release 7.2.xx

7.2.50

7.2.70 – SR2019

7.3.00

7.3.50 – SR2019

7.4.00 – SR2019 and new functionality
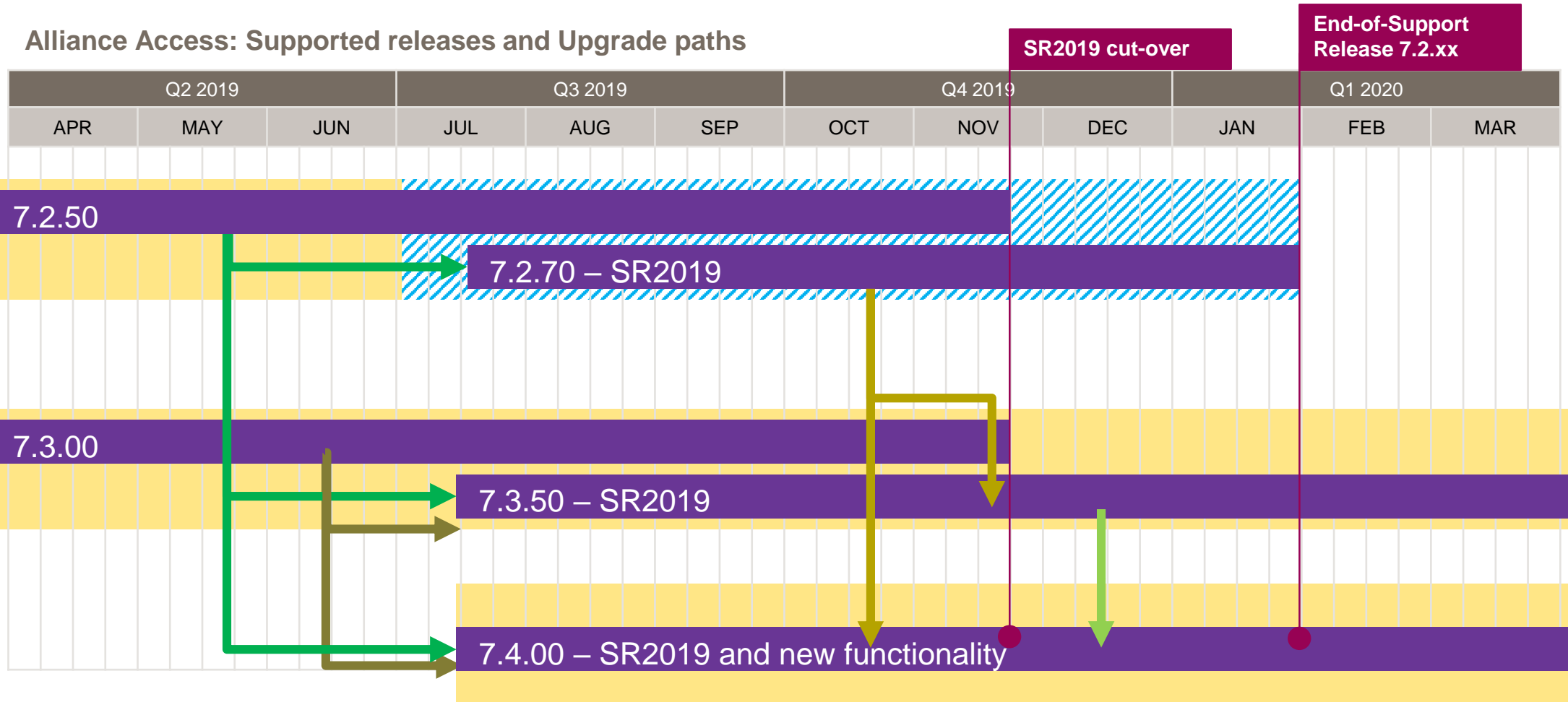
1. Upgrade the OS to the baseline of the target release (supported by tip 1212959)
2. Upgrade Web Platform SE to appropriate minor release
3. Upgrade Access/Entry

Tentative

Release 7.2, 7.3, 7.4 – high level compatibility
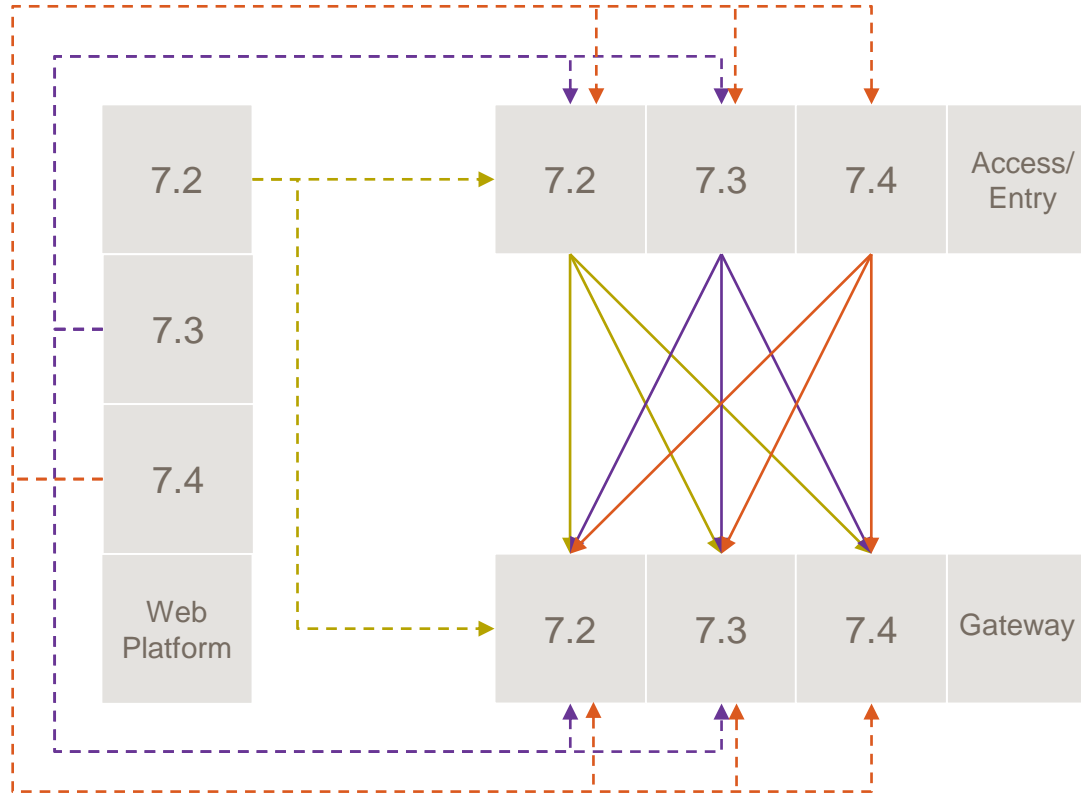
Legend
Can load GUIs of ---->
Can connect to ———>

See tip 5023285

Alliance Access/Entry
Optional update 7.5

- **Standards Release 2020**
- **New security features**
- **Functional enhancements**
  - Support **ISO20022 programme**
  - Support **ESMIG**
  - Support **Universal conformations** from CSV
- **Maintenance fixes**
- **Installable on top of 7.3 and 7.4**
- **Potential OS evolution**
  - AIX 7.2 TL3
  - **Red Hat Enterprise Linux 8**
  - **Windows Server 2019**
- **IPLA components will need to be changed**

Supported until end January 2023

Tentative

Universal Confirmation

See also www.swift.com/confirm

SWIFT

Global adoption: By end 2020, all SWIFT FIs will benefit from tracking and credit confirmations

To build a world where customers have certainty on all their payments, all financial institutions will need to confirm payments by 2020

"Tracker for all financial institutions" vision is a key enabler to reach that ambition

2020 — Universal Confirmations

2019 — Basic Tracker

2018 — Universal UETR

2017 — Rapid initial adoption

SWIFT
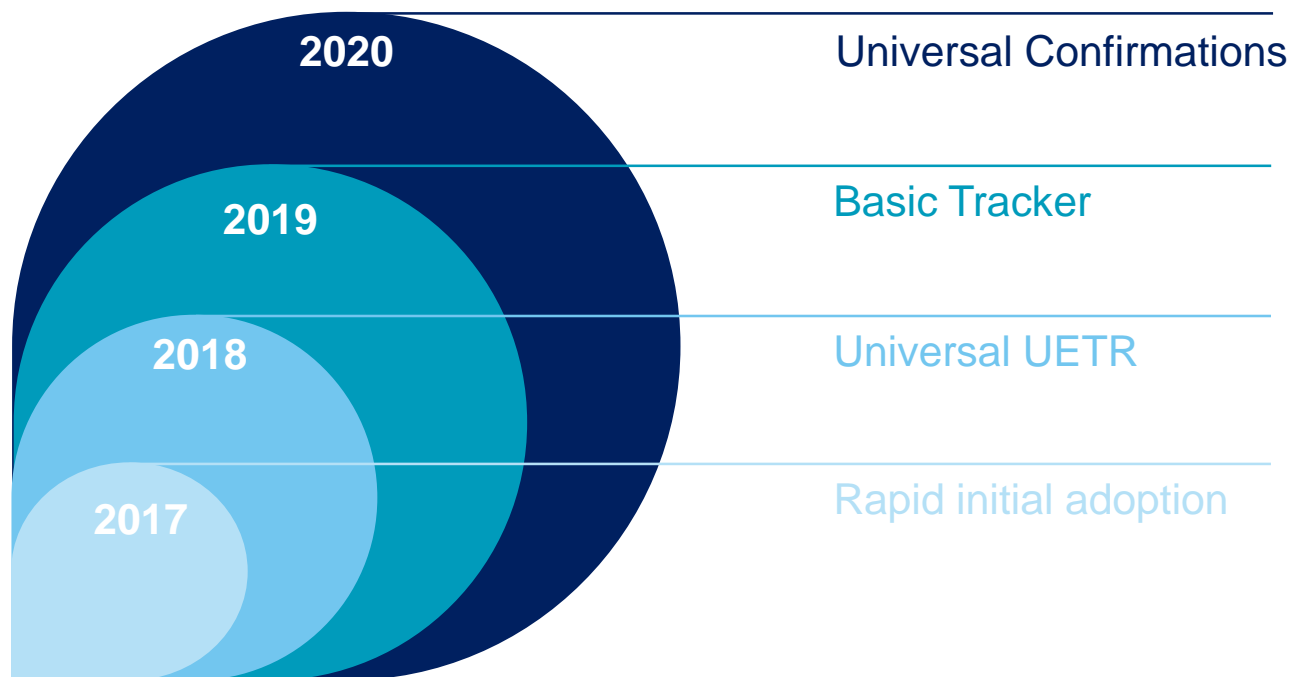
Business rules for Universal Confirmations – all financial institutions

SWIFT

FIN

Universal Confirmations for MT 103
Rulebook
Advance information

This document sets out the business rules and technical specifications applicable to FIN users to provide confirmations to the Tracker for received MT 103 on FIN. Providing confirmations will be optional as of 17 November 2019 and will become mandatory as of 22 November 2020 for all MT 103 receivers on FIN. This publication will be updated towards the Standards MT Release 2020 implementation date when new information becomes available. Official publication is planned for 17 November 2019.

07 June 2019

New

Rulebook

This document sets out the business rules and technical specifications applicable to FIN users (1) to provide confirmations to the Tracker for received MT 103 on FIN.

Providing confirmations will be optional as of 17 November 2019 and will become mandatory as of 22 November 2020 for all MT 103 receivers on FIN.

Full version on:
www.swift.com/confirm

(1)   FIN Users in user categories Supervised Financial Institution (SUPE) and Payment System Participant (PSPA)

The diagram below indicates the different roles the receiver can play and the different use cases:
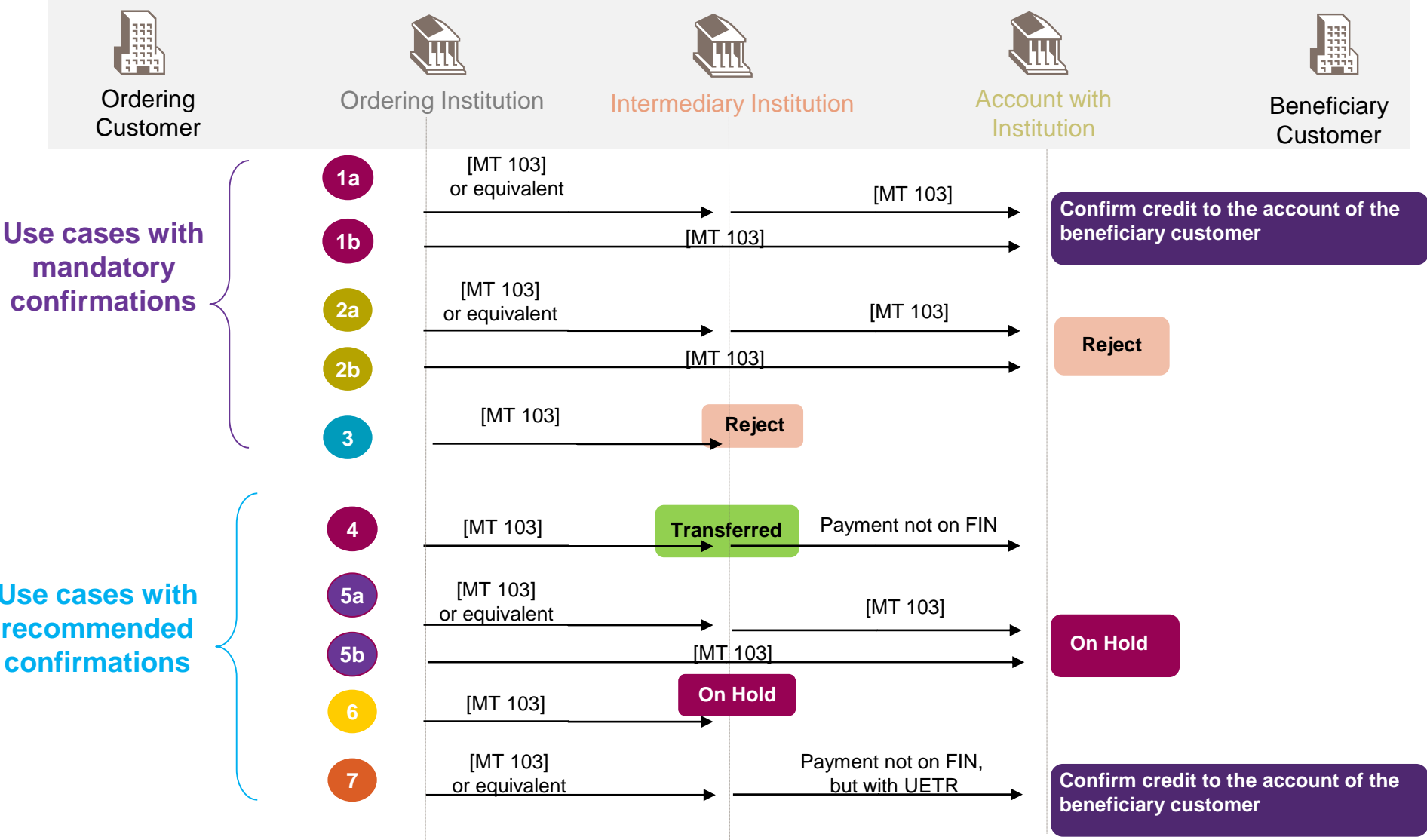
There will be different channels to help banks generate confirmations

Options to provide confirmations

Manual

1	Basic Tracker GUI (*)	Live in Nov'2019

Automated

2	MT 199 Confirm for All	SR 2019
3	API Confirm for All	SR 2019 – requires gpi Connector
4	ISO 20022	SR 2020 – specifications ready in Nov'2019
5	Batch confirmations	SR 2020
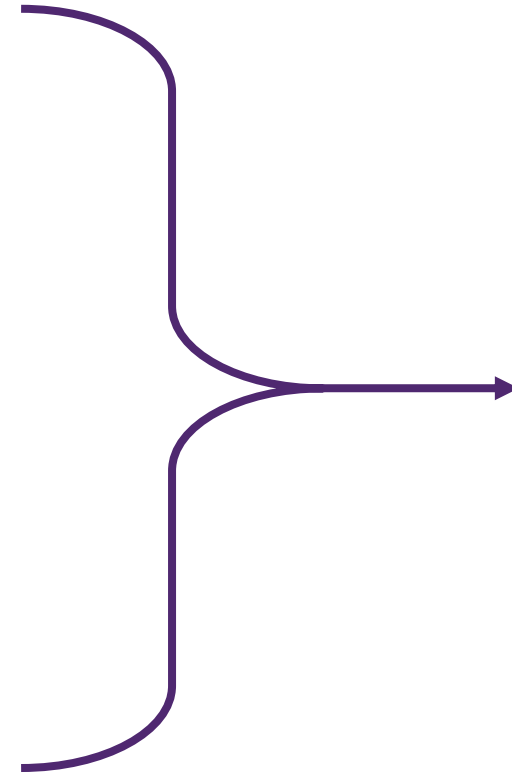
(*) gpi members use the full SWIFT gpi Tracker GUI for manual confirmations

Payments Tracking

SWIFT Tracker

Batch Confirmation

Payments Tracking

SWIFT Tracker

Instructing gpi Agent
Originator

MT 103 + UETR & STI:001

Intermediary Agent

MT 103 + UETR & STI:001

Beneficiary Agent
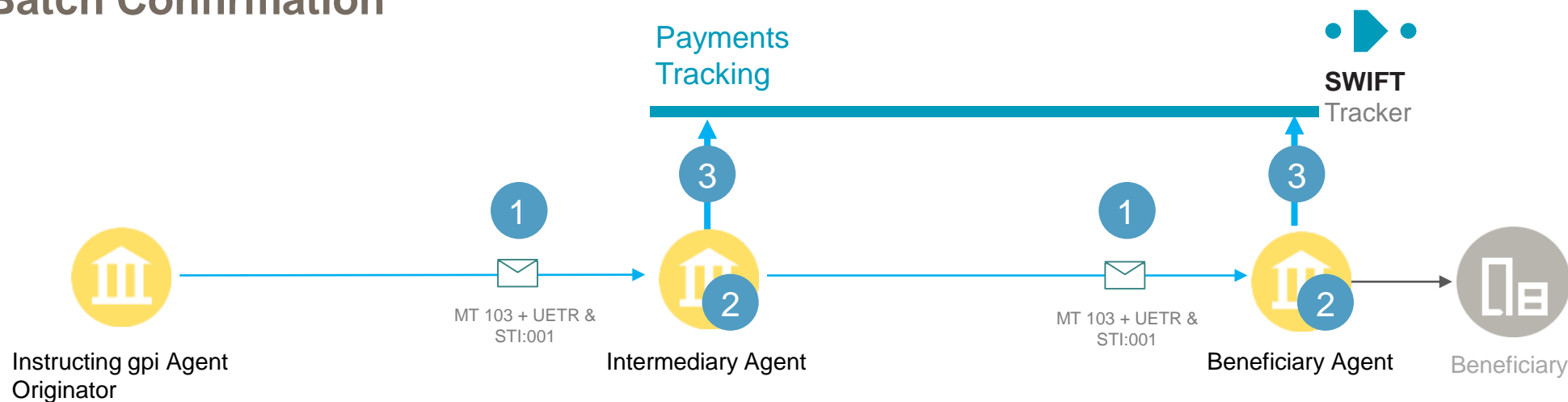
Beneficiary

1. Intermediary or Beneficiary bank receives MT 103 with UETR and passes MT 103 to payment application

2. End of day report: payment application builds the list of confirmed payments in CSV file with UETR

3. Alliance interfaces convert CSV to API call and updates the Tracker for all status in CSV file

Alliance Access/Entry

API (or MT 199)

CSV*

MT 103 + UETR & STI:001

Payment application

Intermediary Agent Beneficiary Agent
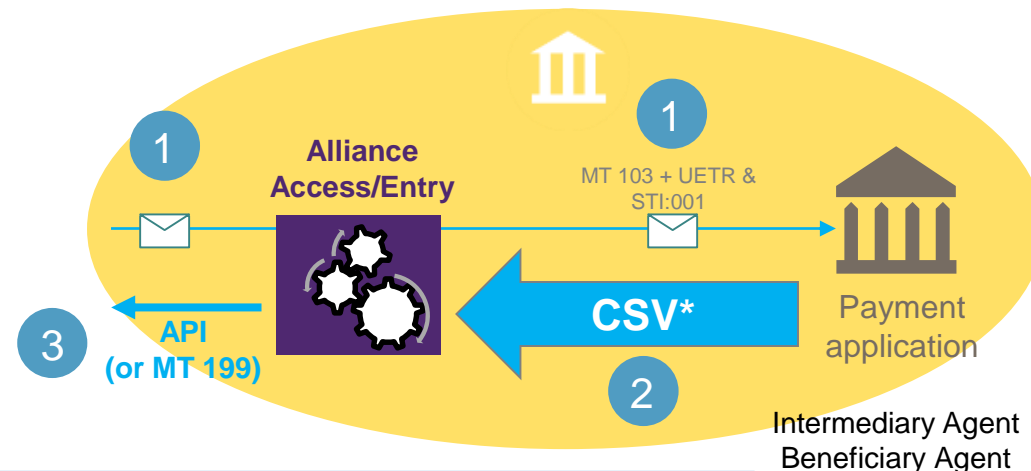
(*) CSV Comma Separated Values, flat file format generated by many systems
File generated by Payment System containing for each payment:
1. the UETR or MT 103 Transaction Reference (TRN)
2. the payment status (confirmed or rejected)
3. credited amount & currency
4. date and time of credit

Batch Confirmation – 2 CSV formats to confirm payments

① Universal Confirmation

Universal Confirmation rulebook

- ✓ Any SWIFT user can confirm
- ✓ **2 statuses: Confirmed and Rejected**
- ✓ UETR is expected
- ✓ If no UETR: the interface will retrieve the original MT 103 using the Transaction Reference (field 20)

② gpi bank

gpi rulebook

- ✓ gpi BIC can confirm with gpi SLA
- ✓ non-gpi BIC can confirm
- ✓ **All gpi statuses supported (ACCC, ACSP, RJCT, RETN)**
- ✓ UETR is expected
- ✓ If no UETR: the interface will retrieve the original MT 103 using the Transaction Reference (field 20)

① Universal Confirmation

"UC-CSV1",["UETR"] (UUIDv4Identifier),"Related_Reference" (16x),"DateTime"(YYMMDDHHMM±HHMM),"Status_Code"(ACCC or RJCT),["Reason Code"],"StatusOriginator" (4!a2!a2!c[3!c]),
"Currency"(3!a), "Amount"(15d), ["Original_Currency"](3!a),["Target_Currency"](3!a),["Exchange_Rate"](12d)

DRAFT

Samples:
"UC-CSV1","fba18c49-7a48-4f5c-b890-bb3bf47f5807","Ref123","2012011102+0100","ACCC","BANKBEBBXXX","EUR","10000,00",,,
"UC-CSV1",,"Payment0123444","2012011000+0100","RJCT","DUPL","BANKBEBBXXX","EUR","9500,",,,
"UC-CSV1","bf95b4d4-b675-4f7e-886d-36d8765b7e32","Reference0009654","2012011659+0100","ACCC","BANKBEBBXXX","USD","12000,","EUR","USD","0,91"

② gpi bank

"GPI-CSV2",["UETR"] (UUIDv4Identifier),"Related_Reference" (16x), "DateTime"(YYMMDDHHMM±HHMM),"Status_Code" (ACCC, ACSP, RJCT, RETN),
["Reason Code"] (See code list),"StatusOriginator" (4!a2!a2!c[3!c]),["ForwardedToAgent"] (4!a2!a2!c[3!c]),["SettlementMethod"] (INGA,INDA,COVE,CLRG),
["ClearingSystem"] (see code list),"ConfirmedCurrencyAndAmount" (3!a15d),["ChargeCode"](OUR, BEN, SHA),["Original_Currency"] (3!a),["Target_Currency"] (3!a),
["Exchange_Rate"] (12d),["Deduct"] (3!a15d)(repetitive)

Samples:
"GPI-CSV2","97ed4827-7b6f-4491-a06f-b548d5a7512d","Ref123","PYMT123","2012011102+0100","ACCC",,"BANKBEBBXXX",,,,"EUR10000,00",,,,,
"EUR10,","EUR20,"
"GPI-CSV2",,"Payment0123444","2012011402+0100","RJCT","DUPL","BANKBEBBXXX",,,,"EUR9500,",,,,,
"GPI-CSV2","76ed3716-6b5f-2291-a06f-b548d5a7512d","Ref123","Reference00099654","2012011659+0100","ACSP","G000","BANKBEBBXXX","GPICBICXXX",
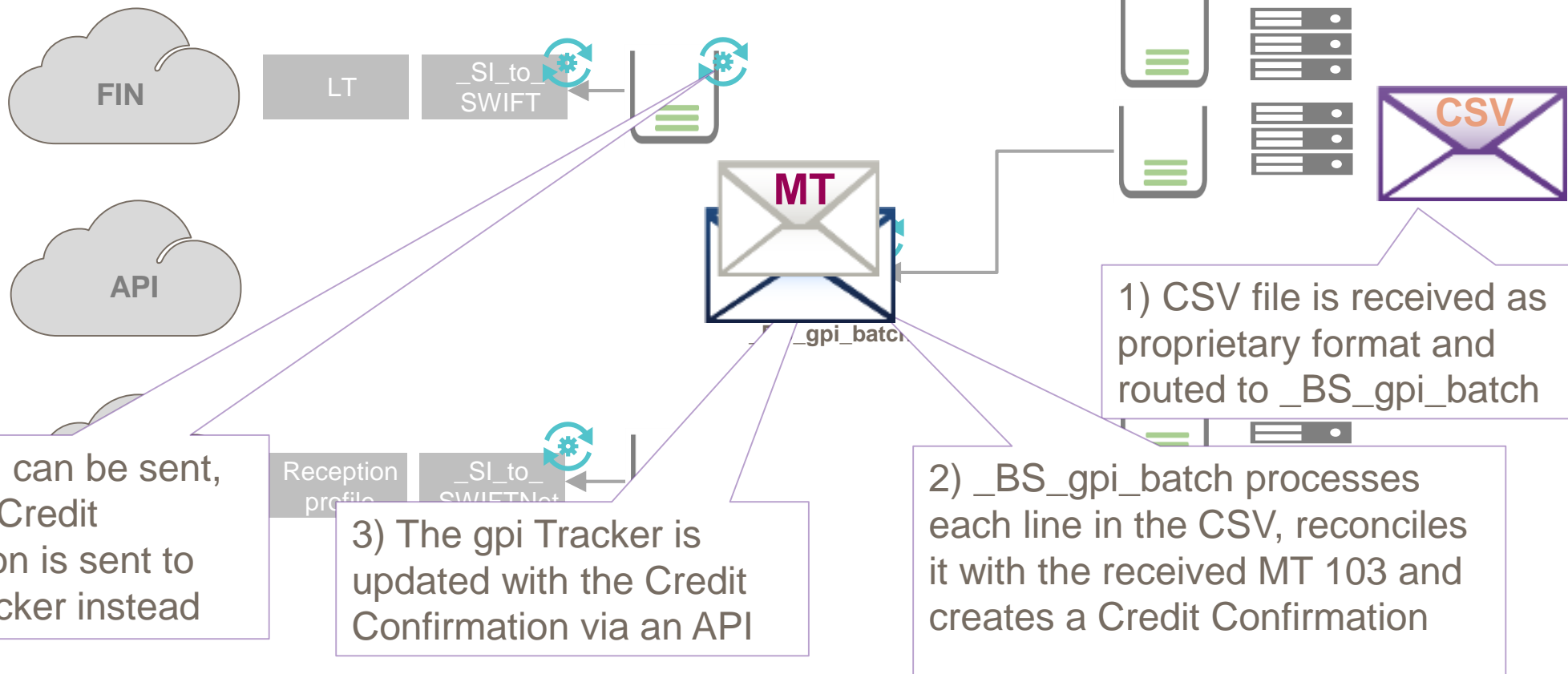"INGA",,"USD12000,","BEN","EUR","USD","0,91","EUR10,","USD20,"

Alliance Access/Entry
Optional update 7.5: Universal Conformations in batch via CSV

Mid July, 2020

Business Applications

FIN

LT

_SI_to_ SWIFT

API

SWIFT
Tracker

CSV

MT

_BS_gpi_batch

Reception profile

_SI_to_ SWIFTNet

4) If no API can be sent, an MT199 Credit Confirmation is sent to the gpi Tracker instead

3) The gpi Tracker is updated with the Credit Confirmation via an API

2) _BS_gpi_batch processes each line in the CSV, reconciles it with the received MT 103 and creates a Credit Confirmation

1) CSV file is received as proprietary format and routed to _BS_gpi_batch

Tentative

- **Configuration to send as API or MT 199 based on standardised CSV**
- **Lookup of UETR if not provided by back office**
- **Possibility to define standard deducts**

Event Log Details

Name	Gpi CSV No or Multiple MT103 Found	Number	2304
Class	System	Application	Base Server
Severity	WARNING	Function	
Date & Time	2019/10/09 14:34:24	Sequence	2147484159
Alarm	None	Security	☐
		Configuration Management	☐
		Operator	System
		Host Address	klwx0341
		Browser Address	
		Browser Hostname	

Description: Multiple UETR match or no UETR match found for MT103 UETR : Fvqn5MQbElr4kta3PvlfN1MzzAQc8U8QXMgb. MT199 is generated and routed to _MP_mod_text queue, modification is required

Tentative

- **Configuration option to schedule end-of-day Universal Confirmation generation**
  - At the end of the day (configurable), for each received MT 103/pacs.008 for which no Confirmation was sent, the tracker will be informed with ACSP/G002 (credit to Creditor's account may not be confirmed same day, update will follow)
  - This feature is not compatible with manual confirmation using the GPI tracker
  - Events that indicate when the process starts and stops
  - Optional event for every generated Universal Confirmation

Tentative

Alliance Access/Entry
Optional update 7.5: Universal Conformations – Message Search

- **Message Search Enhancements**
  - New Search criteria for *Payment Status*
  - New *Payment Status* column in tabular view

- **Message Detail Enhancements**
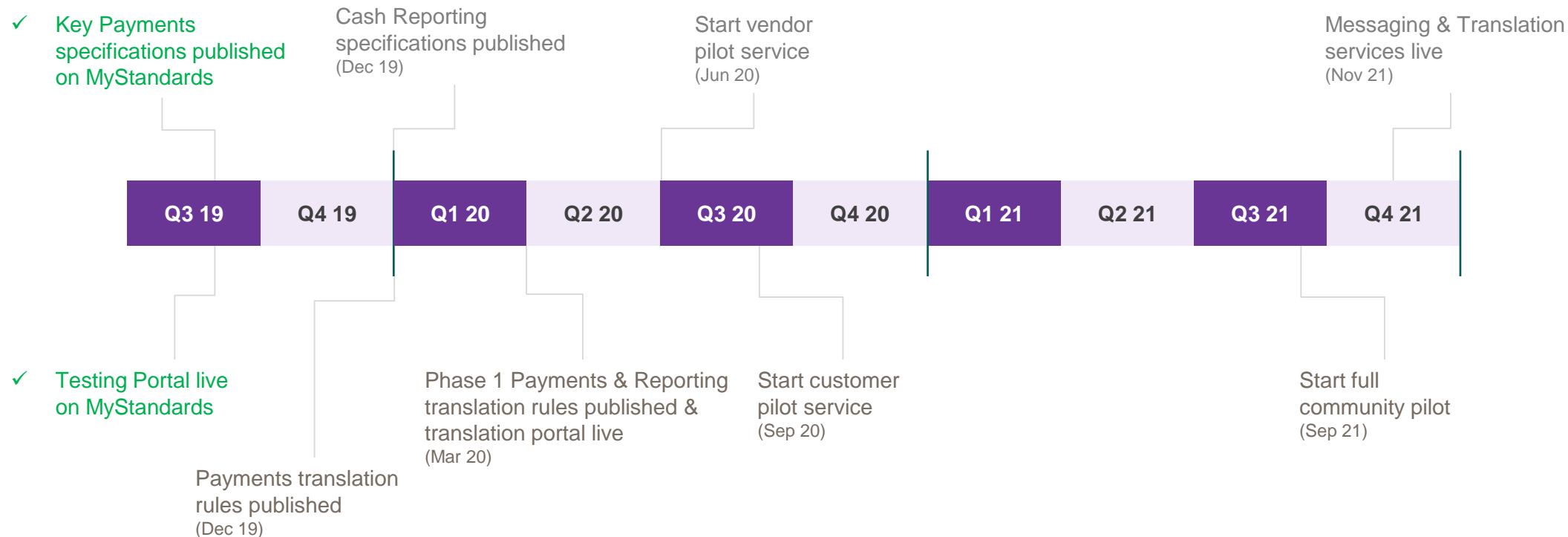 - Display *Payment Status*

Tentative

ISO 20022 programme

See also www.swift.com/standards/iso-20022-programme

ISO 20022 Programme
CBPR+ related deliverables

✓ **Key Payments specifications published on MyStandards**

Cash Reporting specifications published (Dec 19)

Start vendor pilot service (Jun 20)

Messaging & Translation services live (Nov 21)

Q3 19	Q4 19	Q1 20	Q2 20	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21	Q4 21

✓ **Testing Portal live on MyStandards**

Phase 1 Payments & Reporting translation rules published & translation portal live (Mar 20)

Start customer pilot service (Sep 20)

Start full community pilot (Sep 21)

Payments translation rules published (Dec 19)

SWIFT

Note: A plan for Phase 2 to publish CBPR+ approved usage guidelines (UGs) for MT 204, n95, 103 REVERSE will be defined in Q1 2020

Vision for ISO 20022 programme for Access/Entry users

- **Minimise the impact** of the first day of the ISO20022 migration window
  - Make sure that ISO 20022 payment messages can be received with minimum impact
- **Automatic configuration** during software update
  - Pre-configured reception profiles
  - Handle received multi-format MX as MT following the same routing as if it was FIN (_SI_from_SWIFT)
- Able to import the centrally translated **RMA bootstrap** records
- Create/update the **ISO 20022 RMA** record when FIN RMA record is created/changed
- **Message display** will be able to show both the MT and MX view
- Allow **output Message Partners** to be configured whether MT or MX has to be used
- Allow **ADK and IPLA custom code** to handle multi-format MX
  - ADK will work based on the Format type (FIN, MX), with routing allowing to change the format.
  - IPLA will be enhanced to support local translation (MX-MT and MT-MX)
- Allow **custom translation** on the edge via IPLA

Tentative

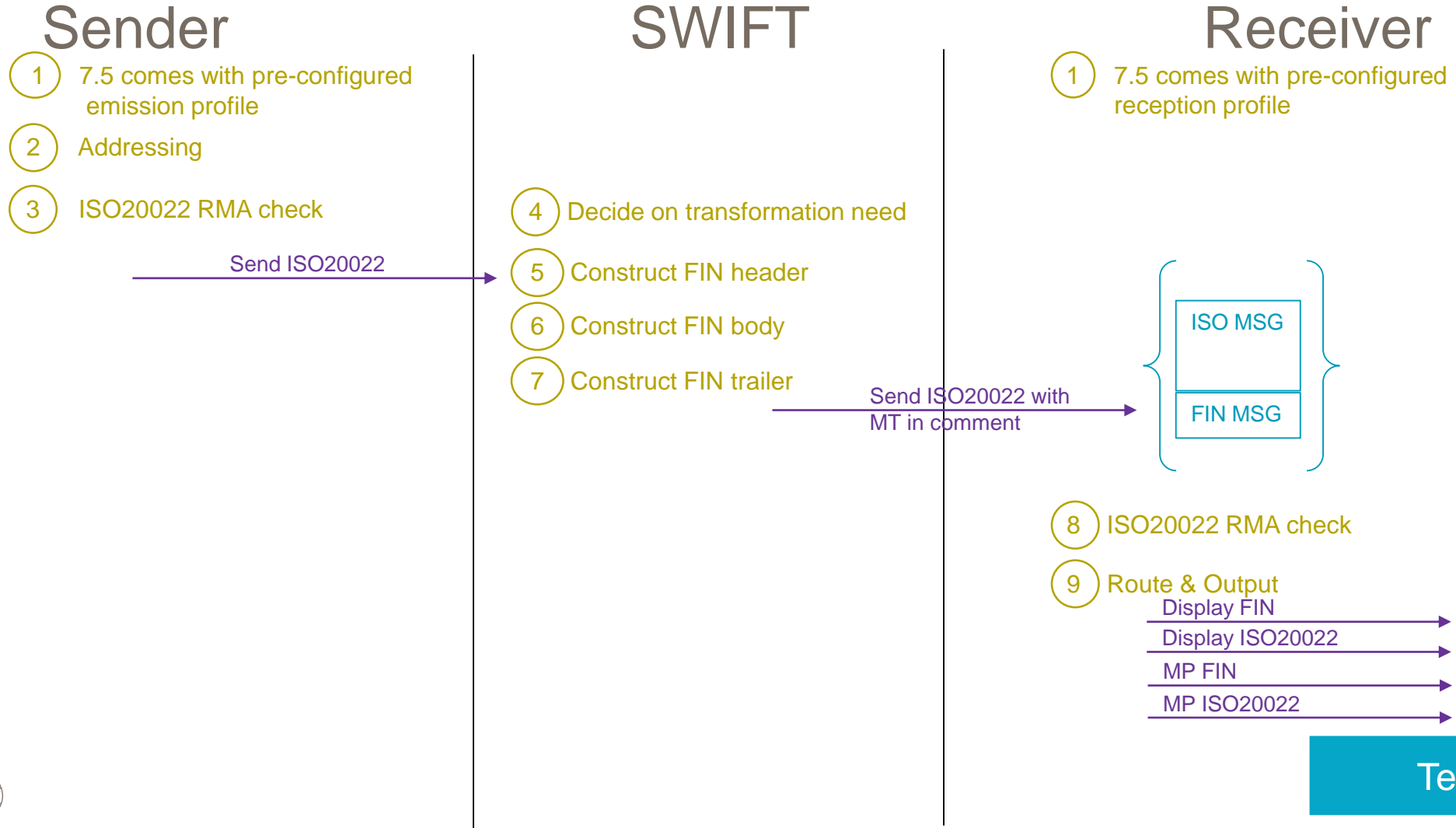# Alliance Access/Entry
Optional update 7.5: ISO20022 programme impact

- **RMA bootstrap**
  - Access/Entry supports RMA export/import already
  - Access/Entry supports RMA for InterAct already
  - Access/Entry 7.4 (and 7.3.50, 7.2.70) allow granular RMA for everybody
  - Access/Entry 7.5 will auto generate RMA records for ISO20022 migration when a FIN RMA is changed

- **BIC vs DN**
  - Enforced level 3 DN format ou=branch,o=bic8,o=swift (e.g. ou=bbb,o=ppppccpp,o=swift)
  - No bic0 for test as there is a separate test service
  - Access/Entry supports already the selection from recently used DNs (matching a substring)
  - Once Reach+ Directory is updated Access/Entry supports lookup from it

- **Translation ISO20022 to MT**
  - End goal must be to have ISO20022 native at the back-office
  - Access/Entry 7.5 will support ISO20022 messages with attachment of the central translation to MT
  - Access/Entry 7.5 will support on-the-edge translation via IPLA custom code
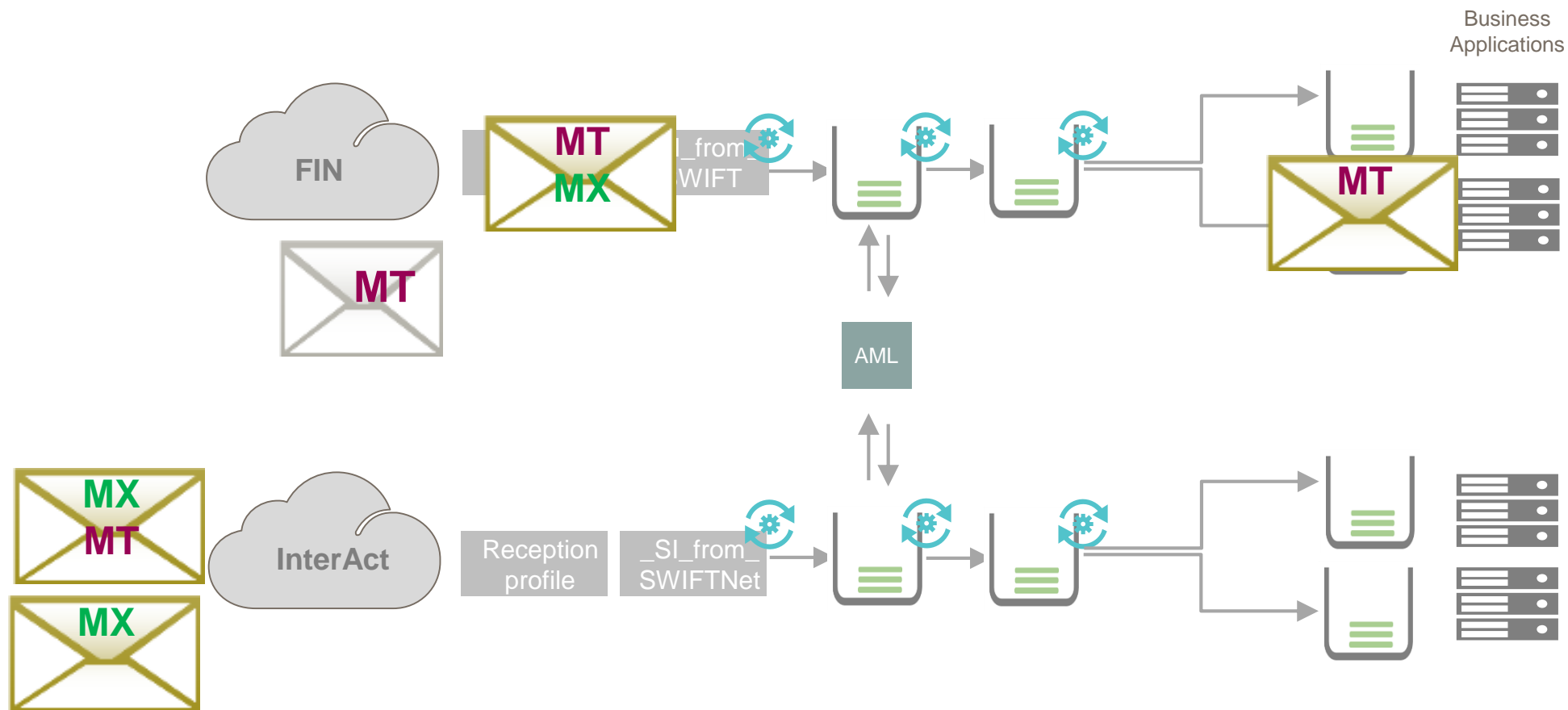 - Access/Entry 7.5 will not support the APIs to call on-demand the central translation

Tentative

How Access/Entry plans to handle central translation

Sender

SWIFT

Receiver

Sender:

1. 7.5 comes with pre-configured emission profile
2. Addressing
3. ISO20022 RMA check

SWIFT:

4. Decide on transformation need
5. Construct FIN header
6. Construct FIN body
7. Construct FIN trailer

Receiver:

1. 7.5 comes with pre-configured reception profile

Send ISO20022 →

Send ISO20022 with MT in comment →

{
ISO MSG
FIN MSG
}

8. ISO20022 RMA check

9. Route & Output
   - Display FIN →
   - Display ISO20022 →
   - MP FIN →
   - MP ISO20022 →

Tentative

Day 1: how will a received ISO 20022 payment be processed by Access/Entry

Business Applications

FIN

MT
MX

MT

_I_from_SWIFT

AML

MT

MX
MT

MX

InterAct

Reception profile

_SI_from_SWIFTNet

End June, 2020

- **At reception routing keywords from both MX and MT will be extracted**
- **Multi-format MX will be handled as MT by default**
    - i.e. the message will have the keyword Format = SWIFT (which means FIN)
    - Option to re-configure the behaviour and handle them as MX
    - Option to change the value of the Format to MX
- **ADK components will only see the payload set by the Format keyword**
- **IPLA components will be able to look at both MX and MT payload**
- **Message Partner can be configured to provide MX or MT payload**

Tentative

Alliance Access/Entry
Optional update 7.5: How will the FIN message be different?

End June, 2020

- **Block 1**
  - Session and Sequence number will be 0000 000000
  - LT is always X

- **Block 2**
  - Message Input Reference (MIR) will end with 0000000000 (due to sess/seq number)
  - LT is always X

- **Block 3**
  - Some fields will not be used:
    - Banking Priority
    - Message User Reference (MUR)
    - Related Reference for MIRS

- **Block 4**
  - Fields that are truncated will end with +

- **Block 5**
  - Empty {PDE:} when the MX message has a duplication indication
  - {PAC:}, {SYS:}, {PDM:}, {DLM:}, {MRF:} not used

See also Vendor Specification on www.swift.com

Tentative

Updated RMA plan timeline

Recording starts for all new RMAs exchanged

2016-2019   **2020**   **2021**

| started | March 2020 | April 2020 | Q2 2021 | Q4 2021 |

Observation phase

Bootstrapping phase

Import phase

FIN Authorisation enforcement

FIN RMA enforcement

ISO RMA conversion and download

ISO Authorisation enforcement

ISO RMA conversion

SWIFT
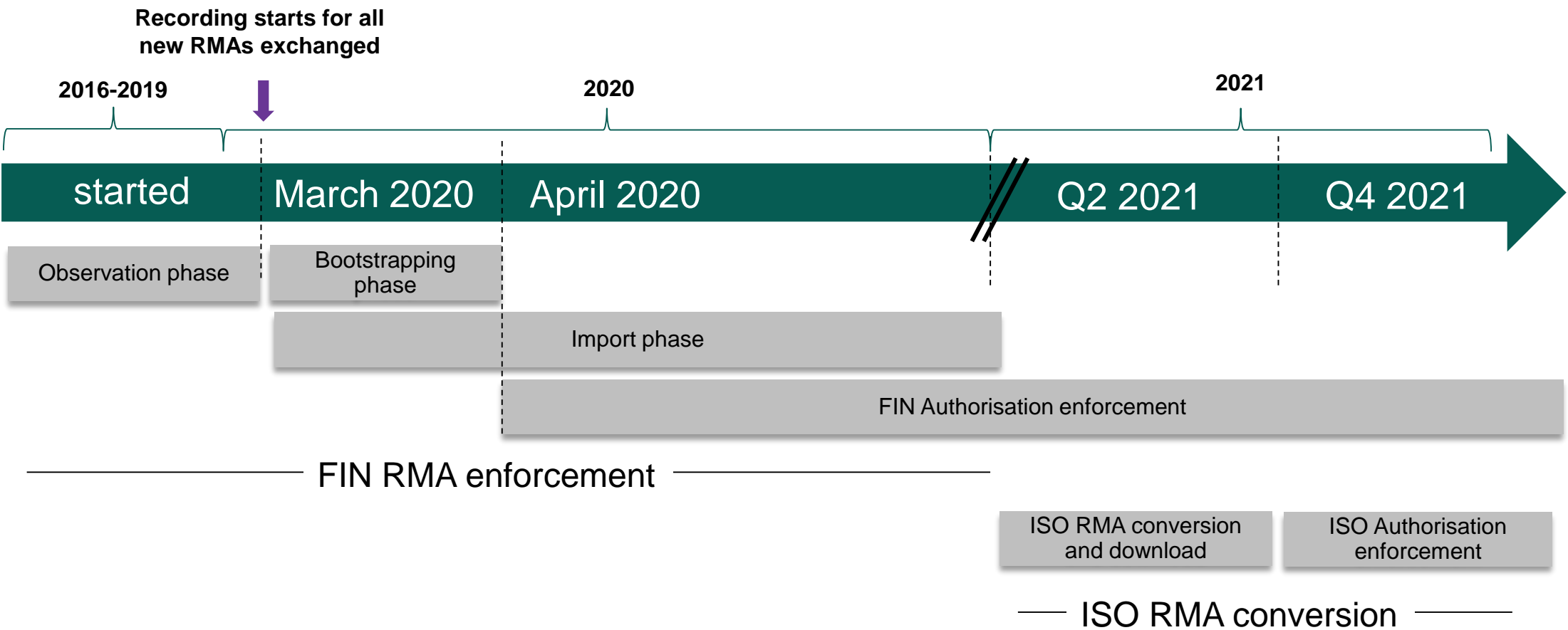
Suggested rules to build Distinguish Names out of registered BIC11

Production BIC11

PPPP CC PP BBB

Prefix Country Suffix │ Branch
──────────────────   ──────
Identifies an entity   a unit

Test BIC11

PPPP CC P0 BBB

For the new service, there will be no need to use the 0 identifier to differentiate test and production. A dedicated SWIFTNet many-to-many test service will created and marked as such (!p). eg. "ServiceName"!p

To Distinguish Names

Distinguish names for production traffic will be derived from the registered BIC11 as follows:
- Always level 3 DN:

  $$\underset{3}{\underline{\text{ou=Branch}}},\underset{2}{\underline{\text{o=BIC8}}},\underset{1}{\underline{\text{o=SWIFT}}}$$

- A valid DN would be: ou=bbb,o=ppppccpp,o=swift

For test traffic, same rule unless there are multiple test BICs for a single production BIC.
- By default, DN will be similar to production and have a level 3
- By exception, if there are multiple test BICs for a single production BIC, a level 4 will be used:

  $$\underset{4}{\underline{[\text{cn=ZTESTBIC,}]}}\underset{3}{\underline{\text{ou=branch}}},\underset{2}{\underline{\text{o=BIC8}}},\underset{1}{\underline{\text{o=SWIFT}}}$$

- A valid DN would still be: ou=bbb,o=ppppccpp,o=swift

Helping to embrace the ISO 20022 programme (beyond the first day of the migration window)

- Ability to define **User Defined Keywords** for ISO 20022 messages
- Input message partners will perform **syntax validation** for ISO 20022 messages
- During message creation **GUI assists in DN selection** when user knows the BIC
- Enhancements on **reference data**

Tentative

Where can I get more help?

Webinars & work sessions

Join a webinar or work session near you to learn why ISO 20022 adoption is necessary, how to make the change and what support SWIFT will provide

SWIFTSmart

The SWIFTSmart e-learning training platform includes an introduction to ISO 20022. A formal curriculum will be published by end of the year

ISO 20022 hub

The ISO 20022 Programme hub provides more information on the programme, timeline, transition period and resources

MyStandards

The CBPR+ MyStandards page hosts all usage guidelines, a readiness portal for testing your back office applications and coming soon a mapping sandbox to publish translation rules

Knowledge Centre

The Knowledge Centre hosts detailed documentation on SWIFT products services, including the SWIFTNet messaging service that will be the basis for the new InterAct service to support CBPR+ compliant flows

Adoption services

Expert standards and technical consultants are available to help you assess impact of ISO 20022, get trained, define your project and support your implementation. Contact your account manager to find out more

Vendor support

SWIFT has provided registered partners with necessary information to incorporate CBPR+ guidelines into their core banking, middleware, screening, reconciliation and other financial products

Customer support

SWIFT Customer Support is available to answer questions if you do not find the information you are looking for

SWIFTSmart

SWIFTSmart learning platform

Interactive, cloud-based service that provides more than 200 courses in multiple languages. Whether you are looking for basic introduction to SWIFT messages or advanced curriculums on SWIFT products and services, the platform gives you the flexibility to train your staff anytime anywhere from any device.

Introduction to ISO 20022

Follow this introductory course to discover what ISO 20022 is and why it is used. Understand how financial messaging standards are built using ISO 20022. Discover who is using ISO 20022 and the role of SWIFT.

Introduction to Standards MX

Follow this introductory course to understand what Standards MX is. Learn the basics of XML. Discover how an MX is identified, structured and formatted.

Customer Payments and Transaction Reporting

Follow this intermediate course to understand the SWIFT customer payment message flows and related transaction reporting, to identify the various parties involved in a customer payment and to understand the differences of a customer payment made with the serial method and the cover method.

(Planned) What you need to know about ISO 20022 adoption in payments & reporting?

(Planned) The move from Category 1 / 2 / 9 MT to ISO 20022 CBPR+ messages

Key messages

- **Remember 7.2 end-of-support date of 31 January 2020**
- **Time to think forward**
    - When will your back office systems be ISO 20022 ready
    - When will your back office systems be GPI ready
    - What do you require to bridge the gap and for how long
    - Develop a multi-year plan that has release 7.5 on it

Closing remarks

Philippe Detournay, Head of Integration Services, APAC, SWIFT

See you in 2020!

SWIFT
Operations
Forum
Asia Pacific

www.swift.com