BS1- Expanding SIS to other e-Invoicing needs in the airline industry

Joao Feliciano – TAP Air Portugal

Jerry Fonacier – Hawaiian Airlines

Kirk Pereira - IATA

Question
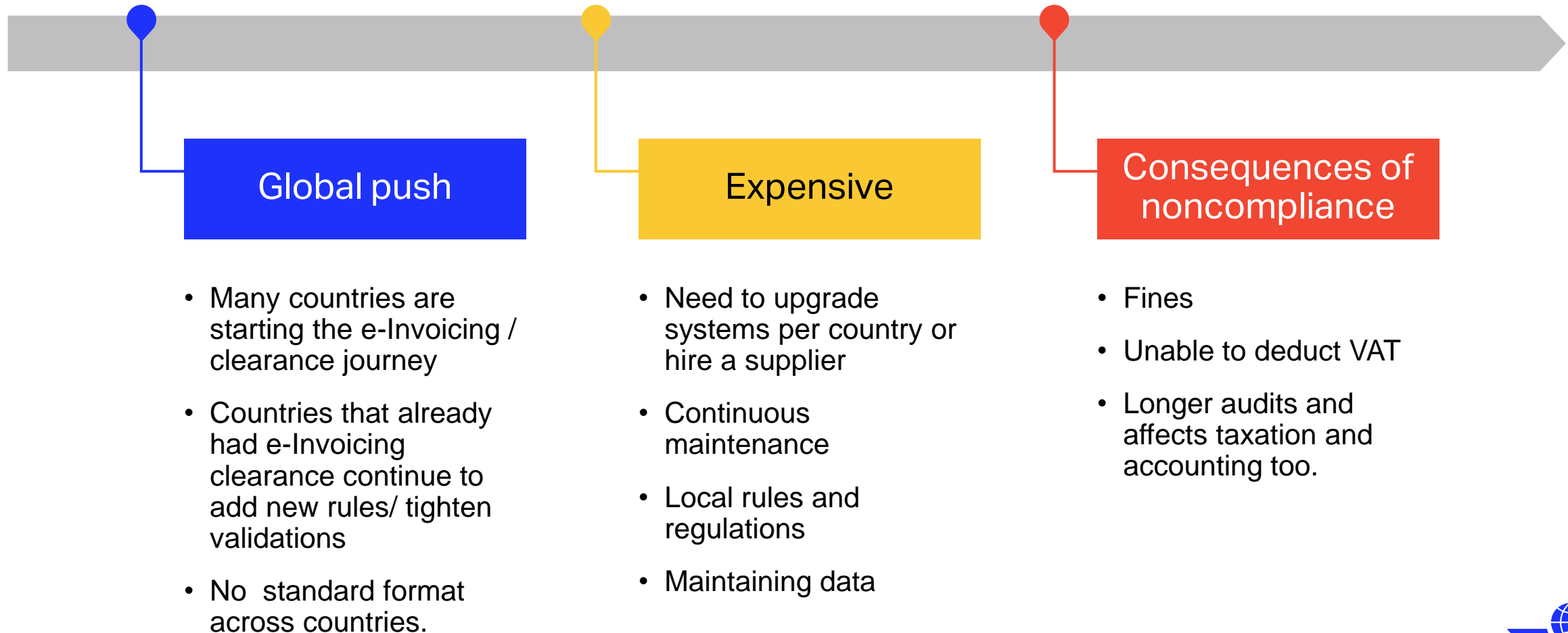
Which division drives the E-Invoicing implementation in your organization?

A. Indirect Tax Team
B. Legal Team
C. I.T. Team
D. Revenue Accounting Team
E. Other

Evolving complexity in E-Invoicing

Why E-Invoicing compliance is important?

Global push

- Many countries are starting the e-Invoicing / clearance journey

- Countries that already had e-Invoicing clearance continue to add new rules/ tighten validations

- No standard format across countries.

Expensive

- Need to upgrade systems per country or hire a supplier

- Continuous maintenance

- Local rules and regulations

- Maintaining data

Consequences of noncompliance

- Fines

- Unable to deduct VAT

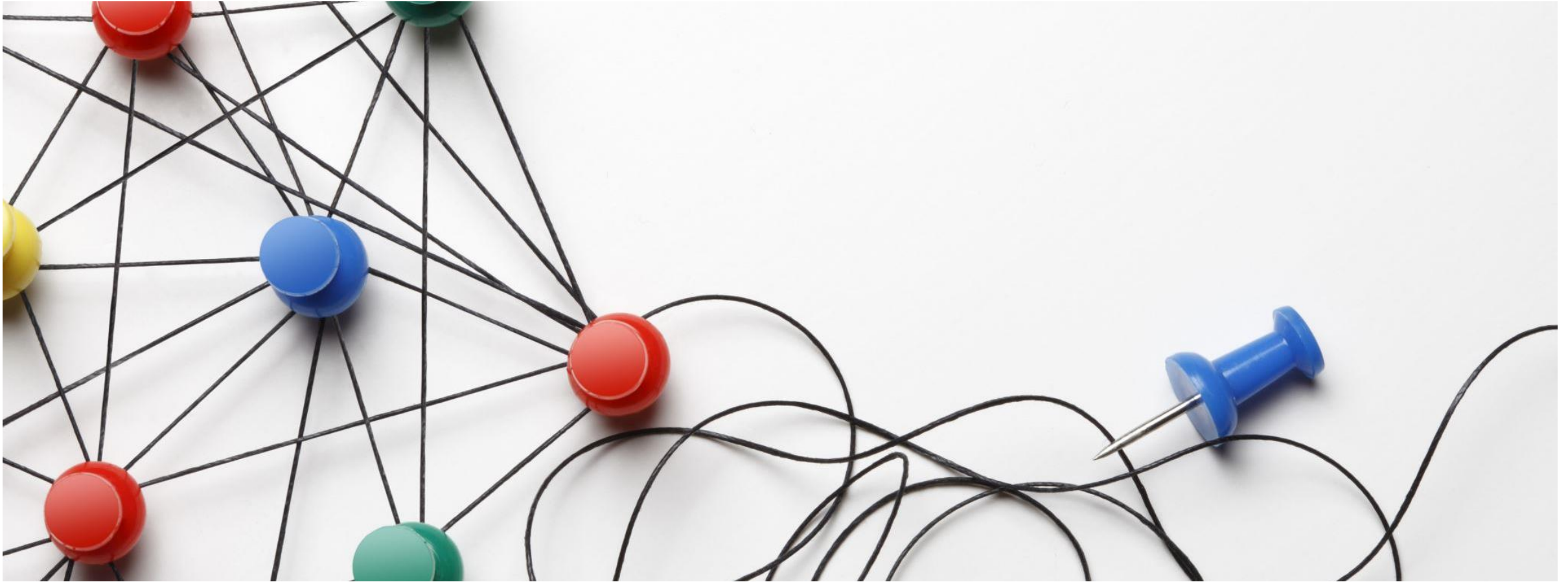- Longer audits and affects taxation and accounting too.

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Question

What is the main complexity you face in E-Invoicing?

- Real time Invoice or VAT/Tax reporting
- Different country rules
- High costs
- Managing multiple suppliers
- All of the above

Expanding SIS Invoicing to solve such needs

SIS facilitates EDI - invoicing

```
CBD000000010011070320
CBD000000021511070ABC 3060032      00000000002209  USDUSD            01
CBD000000032511070ABCP3060032      00009000012208260115739230911PIT BEG PIT
CBD000000042511070ABCP3060032      00009000022209020115739231131PIT BEG PIT
CBD000000052511070ABCP3060032      00009000032209070115739231351MIA JFK MIA
CBD000000062511070ABCP3060032      00009000042208300115739250251SFO JFK SFO
CBD000000072511070ABCP3060032      00009000052208230115739250511MIA JFK MIA
```

IS-IDEC

Types of invoices
- Passenger / Cargo Interline invoices
- UATP invoices
- Miscellaneous invoices for Airport charges, Ground handling, engineering, Lounge etc.

that are exchanged between Airlines or suppliers to airlines

IS-XML

```
<Invoice>
  <InvoiceHeader>
    <InvoiceNumber>PLLOA00001</InvoiceNumber>
    <InvoiceDate>2022-06-28</InvoiceDate>
    <InvoiceType>Invoice</InvoiceType>
    <ChargeCategory>Passenger</ChargeCategory>
    <SellerOrganization>
      <OrganizationID>1234563</OrganizationID>
      <OrganizationDesignator>XB</OrganizationDesignator>
      <LocationID>Main</LocationID>
    </SellerOrganization>
    <BuyerOrganization>
```
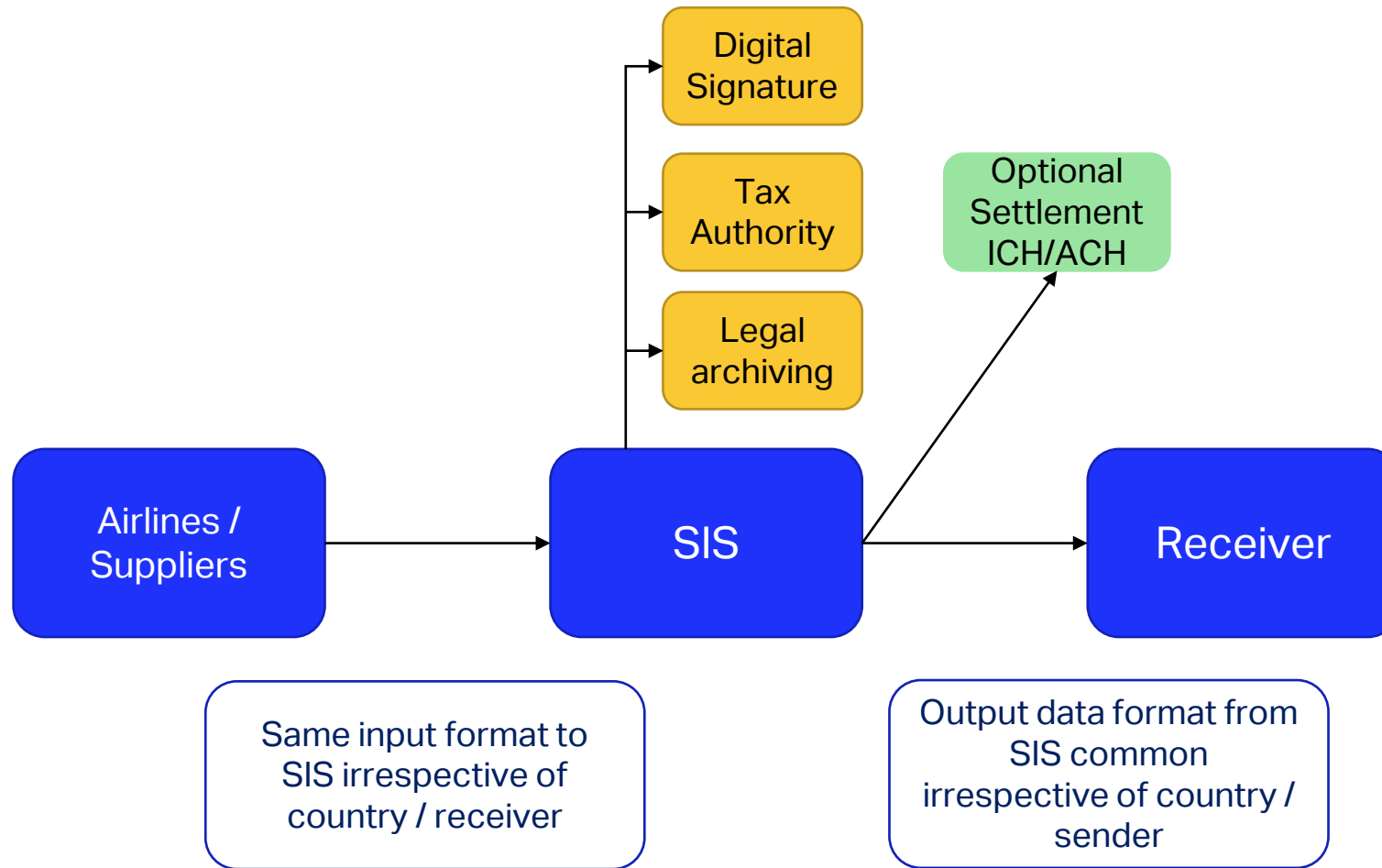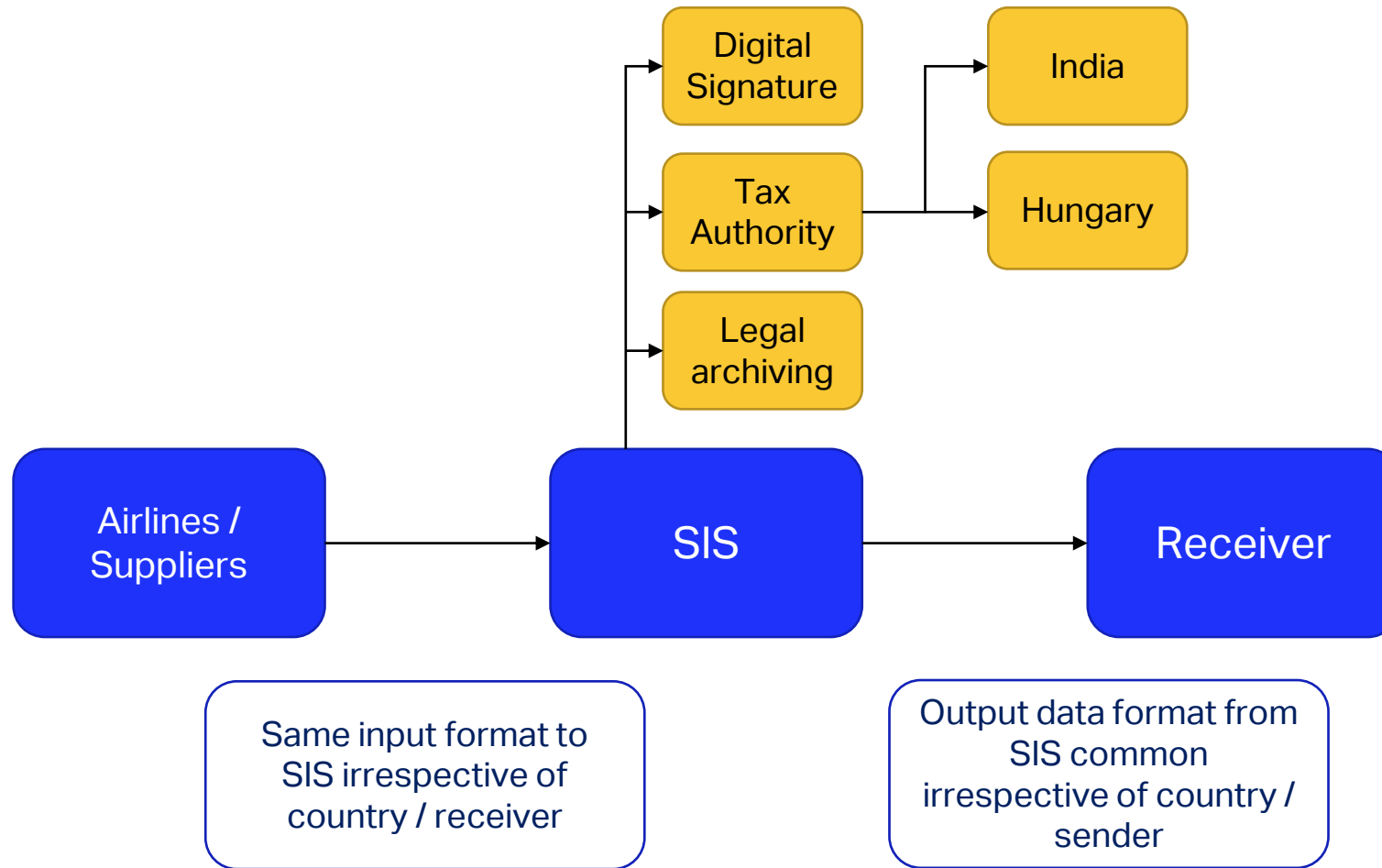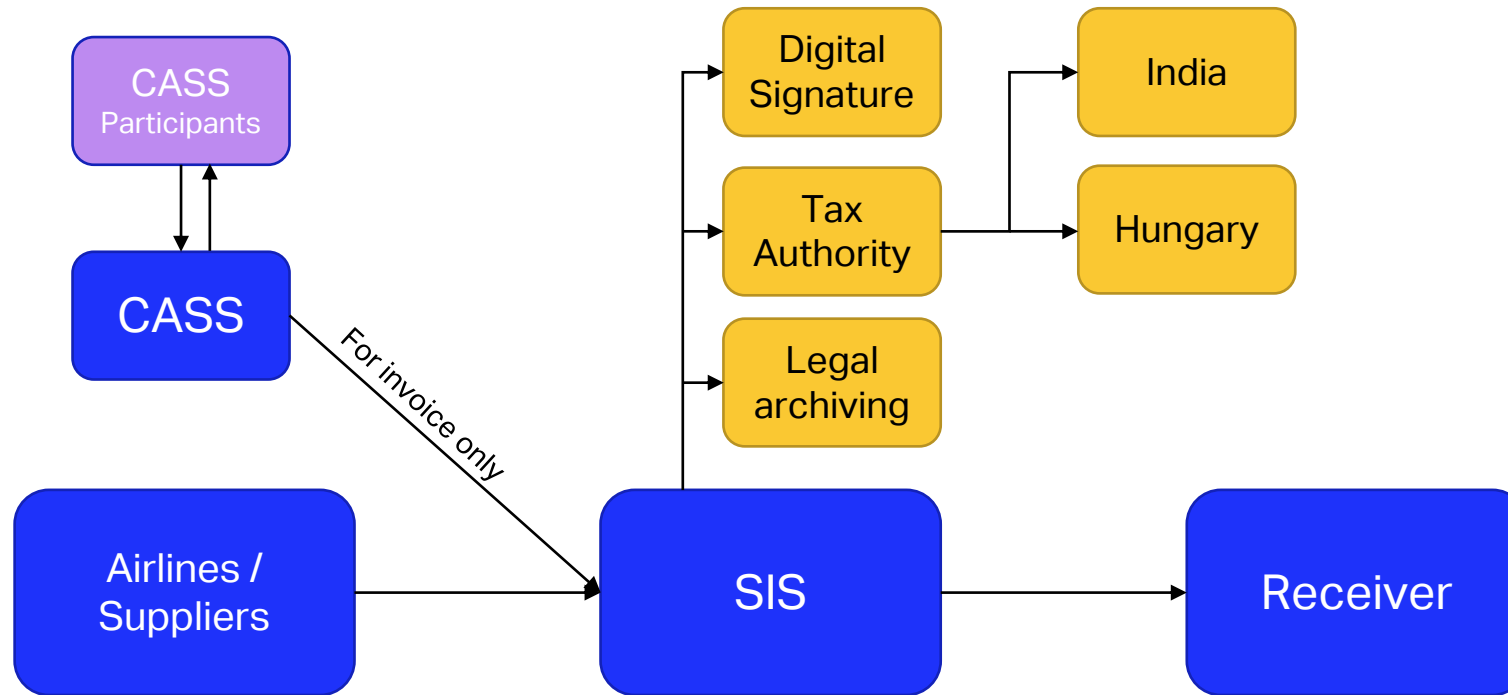
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How does SIS work today?

Digital Signature

Tax Authority

Legal archiving

Optional Settlement ICH/ACH

Airlines / Suppliers

SIS

Receiver

Same input format to SIS irrespective of country / receiver

Output data format from SIS common irrespective of country / sender

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If the invoice needs to be reported/generated via a Govt/central system

Digital Signature

Tax Authority

Legal archiving

India

Hungary

Airlines / Suppliers

SIS

Receiver

Same input format to SIS irrespective of country / receiver

Output data format from SIS common irrespective of country / sender

New CASSLink - SIS Integration

```
CASS
Participants
   ↕
CASS ──────── For invoice only ──────→ SIS

Airlines /
Suppliers ──────────────────────────→ SIS ──────→ Receiver

SIS ──→ Digital Signature
SIS ──→ Tax Authority ──→ India
                      ──→ Hungary
SIS ──→ Legal archiving
```
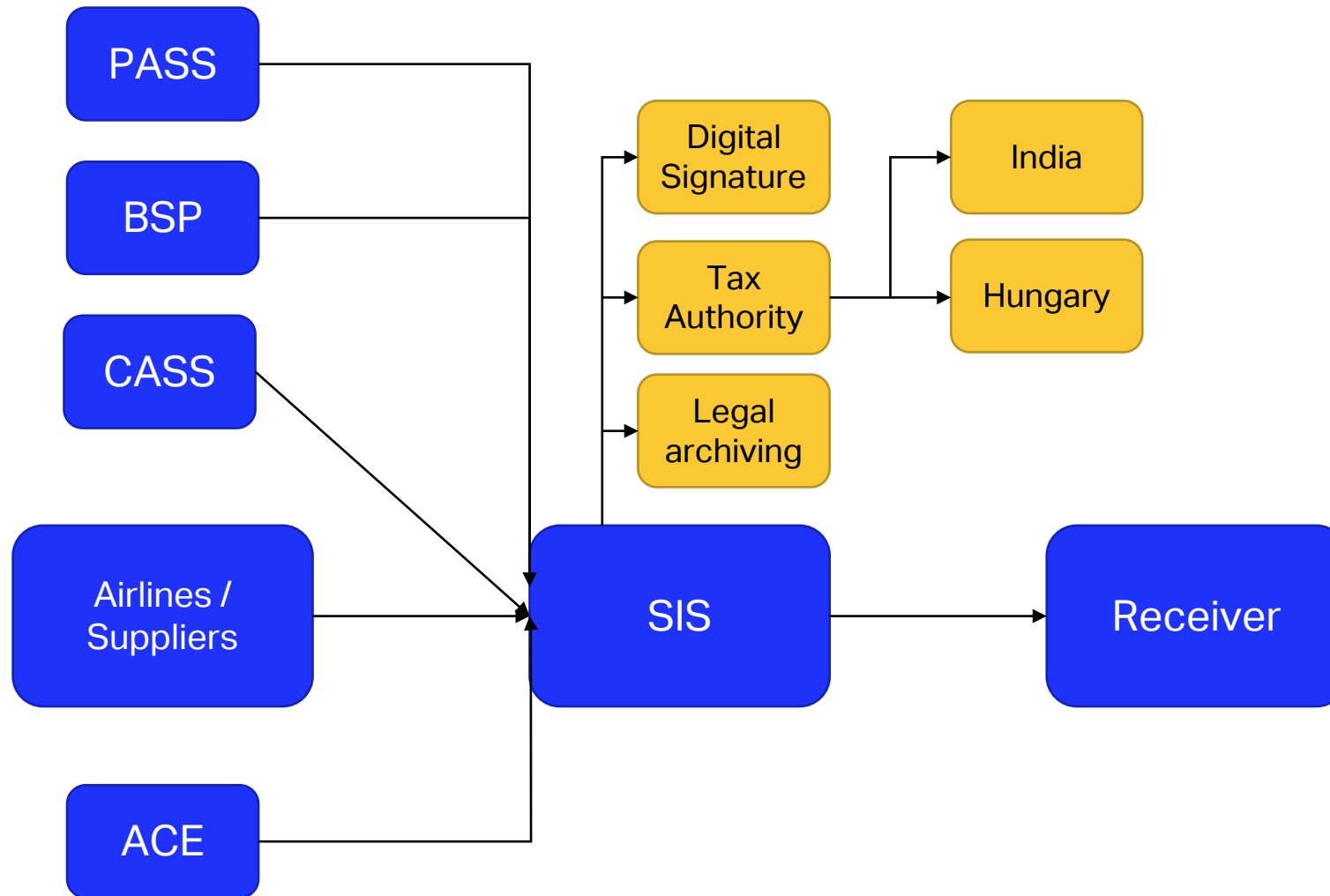
The CASS system connects to SIS for generation of the legal invoice / reporting to tax authority (optional service)
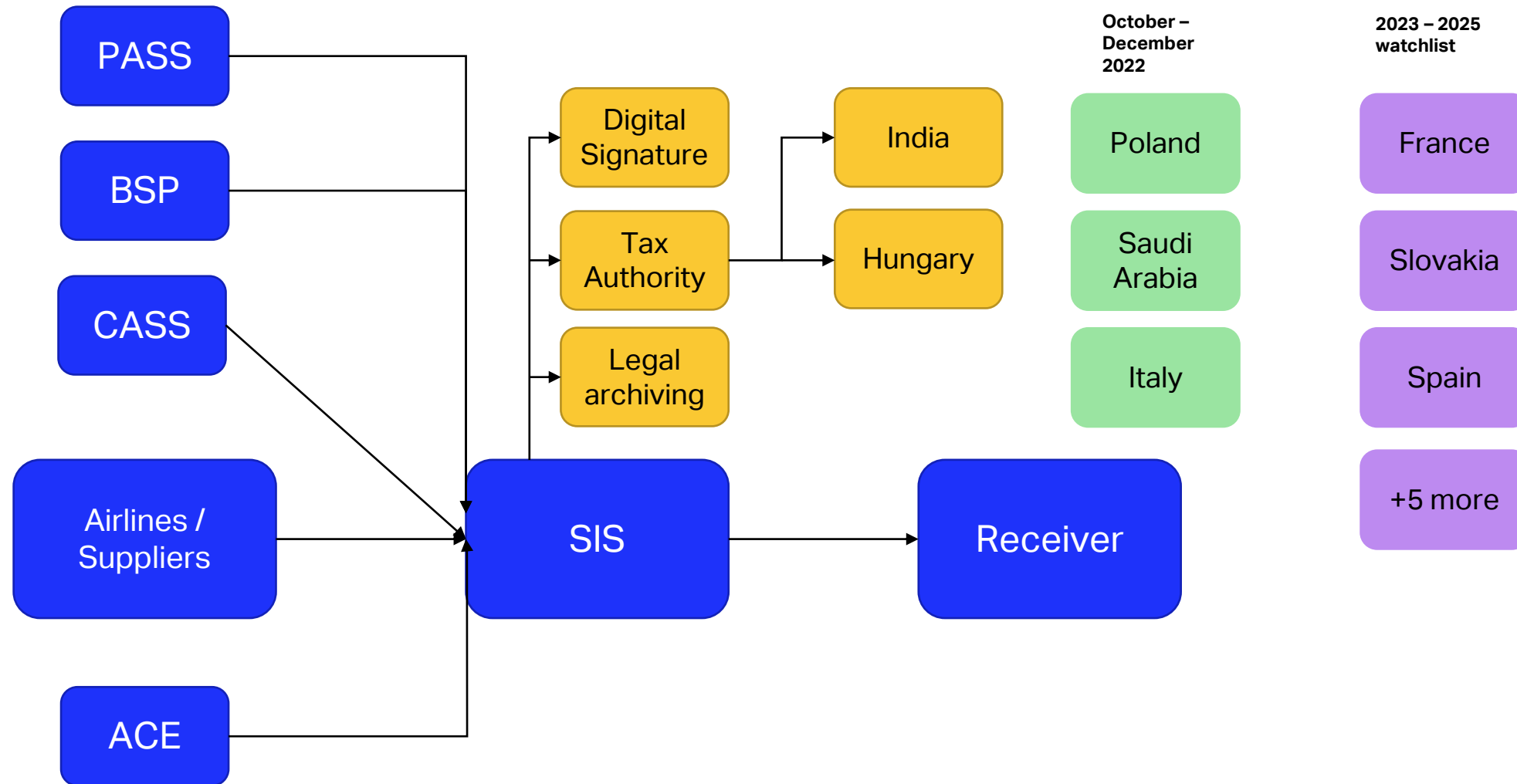
All other CASS processes / services remains under CASS. The integration is only for invoice generation

Once the invoice is generated it will be sent back to CASS + it will also be available in SIS

Other IATA services integration

Expanding the countries

Question 2

Which countries do you have a need for compliant BSP/CASS invoices?

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One platform - multiple types of invoices

- Started off with interline invoices

- Supplier invoices to Airlines

- Added IATA invoices to Travel agents + Freight forwarders

- BSP/CASS Airlines to Travel agents/Freight forwarder invoices

Question: Are there other invoices you are generating outside SIS that you would like to get into SIS?

- Would you be interested if SIS could also serve your B2C invoicing needs?

Benefits of using this solution

Why moving invoicing to SIS is beneficial?

- More countries moving to a clearing model / real time reporting to look at ways to reduce tax/VAT evasion

- Complex invoice layouts and reporting formats per country (XML, JSON, PDF etc.)

- Different requirements for the invoice per country (QR code, Digital signature language, data content, etc...)

- Different archiving requirements
    - Different storage timelines
    - Some countries require it to be stored locally

With SIS, you continue sending one file format* and SIS handles the legal requirements

* Mandatory fields per country could differ

Some takeaways

- Consider SIS for your E-Invoicing compliance needs, we aim at be the cheaper and efficient way to comply globally

- Pass on what SIS can do to your other departments who deal with BSP/CASS/ Taxation / Legal e-Invoicing

- Look at Retailing impact and needs for e-Invoicing compliance for TAX and VAT reporting for ancillary services

- Help us help you
  - Give us a list of countries that you would like us to have on our roadmap
  - If you feel additional features in SIS would be helpful, do let us know

Questions

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Thank you

BS2- Airline Cost Management with SIS Best Practice

Today your speakers

accelya **Sanjyot Tawde** SVP, Global Head for Presales and Customer solutioning
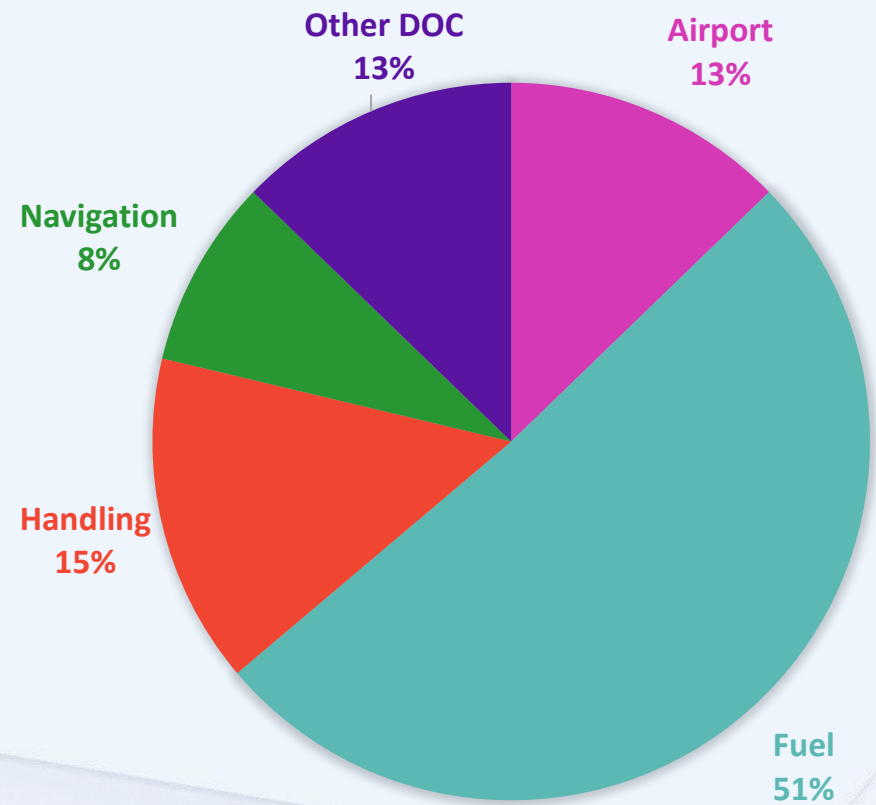
maureva **Florian Bolzoni** Product Manager

DOC DISTRIBUTION

Comparative Scenarios

PRE-PANDEMIC DISTRIBUTION

Other DOC 13%
Airport 13%
Navigation 8%
Handling 15%
Fuel 51%

DISTRIBUTION DURING PANDEMIC

Other DOC 11%
Airport 17%
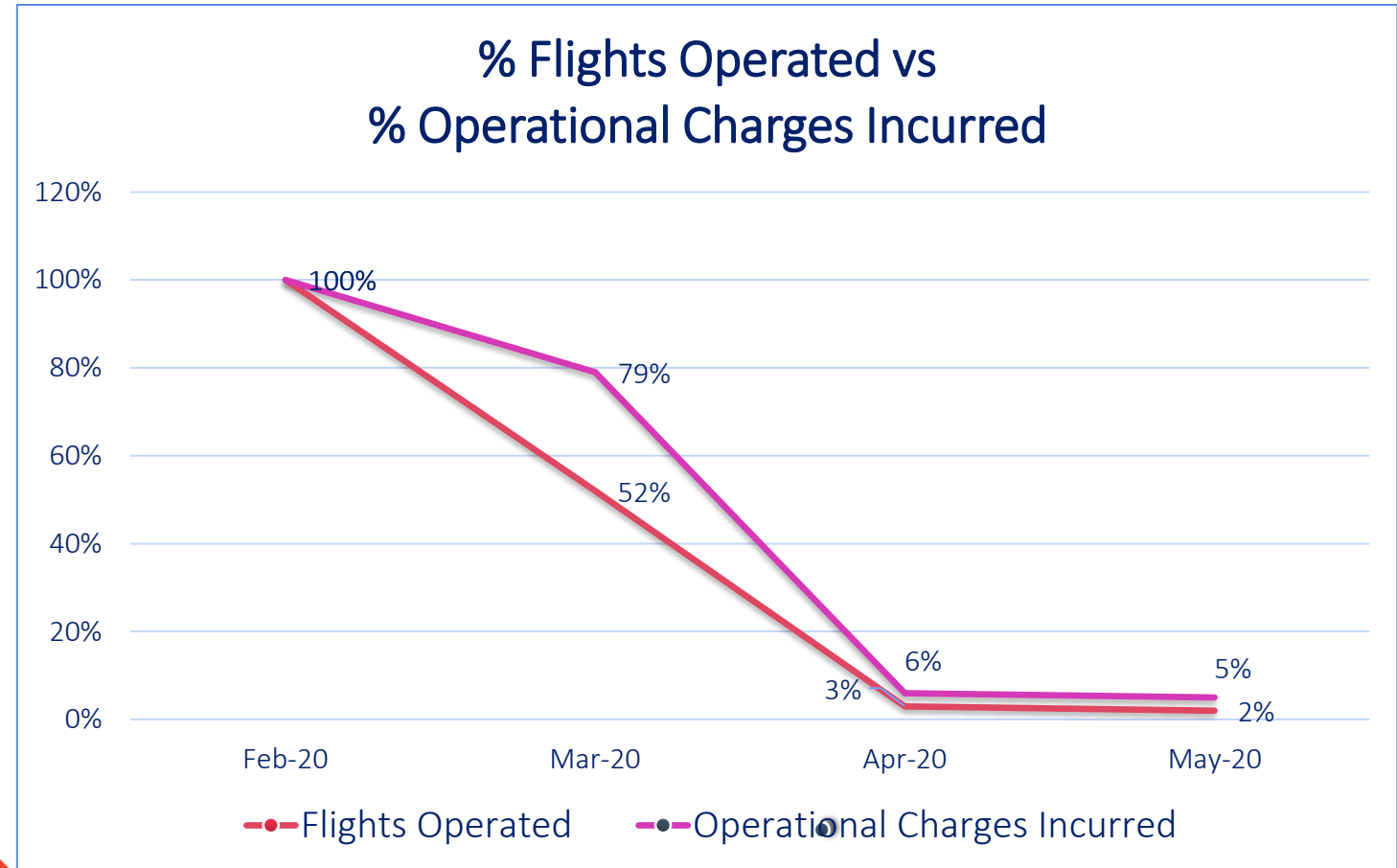Navigation 8%
Handling 28%
Fuel 36%
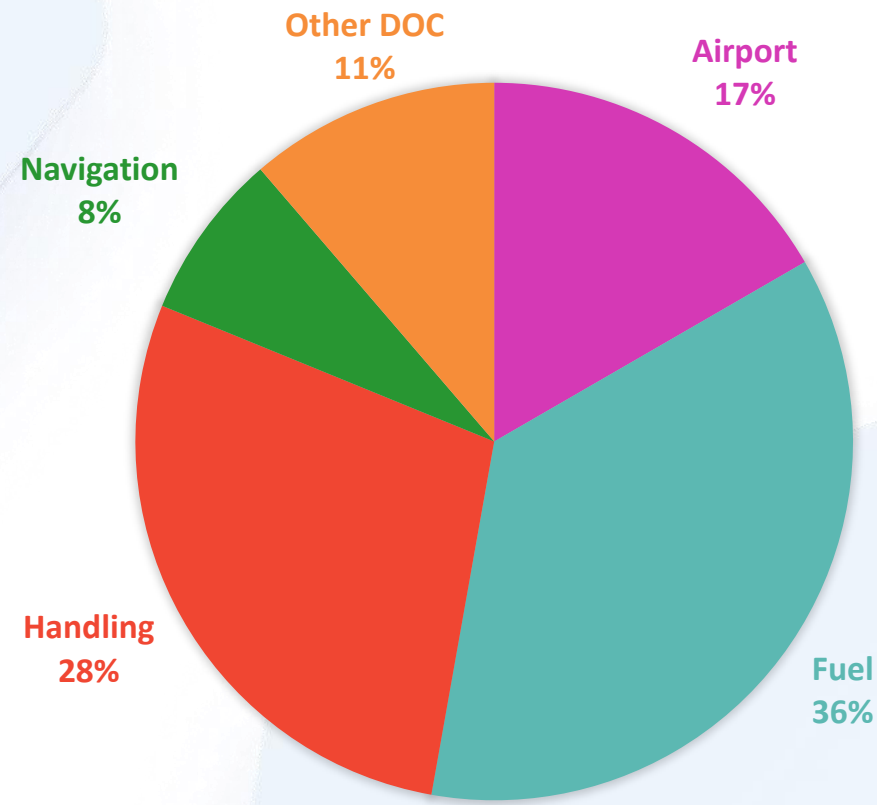
Operations and Operating Costs

During pandemic, flight operations reduced to almost 2% due to severe travel restrictions

Operational Charges didn't follow the same proportions as the reduction in flight volume

Operating costs need not necessarily reduce with a reduction in flight volumes
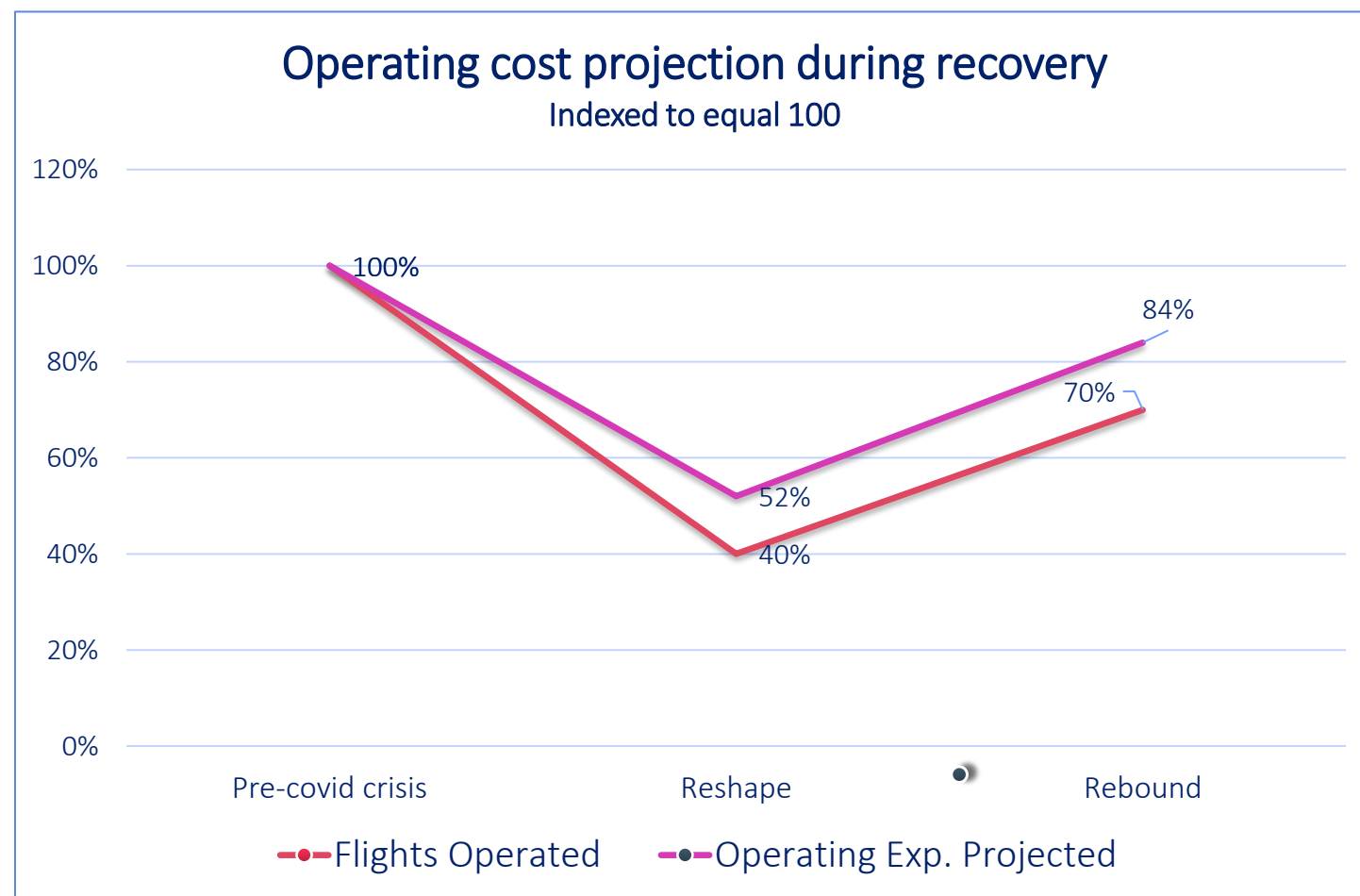
% Flights Operated vs % Operational Charges Incurred

- 100%
- 79%
- 52%
- 6%
- 3%
- 5%
- 2%

Feb-20 · Mar-20 · Apr-20 · May-20

Flights Operated — Operational Charges Incurred

Source: Based on Accelya's experience

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Operating Cost Behavior in the Recovery Phase

Operating expenses increase at a much faster rate than operations.
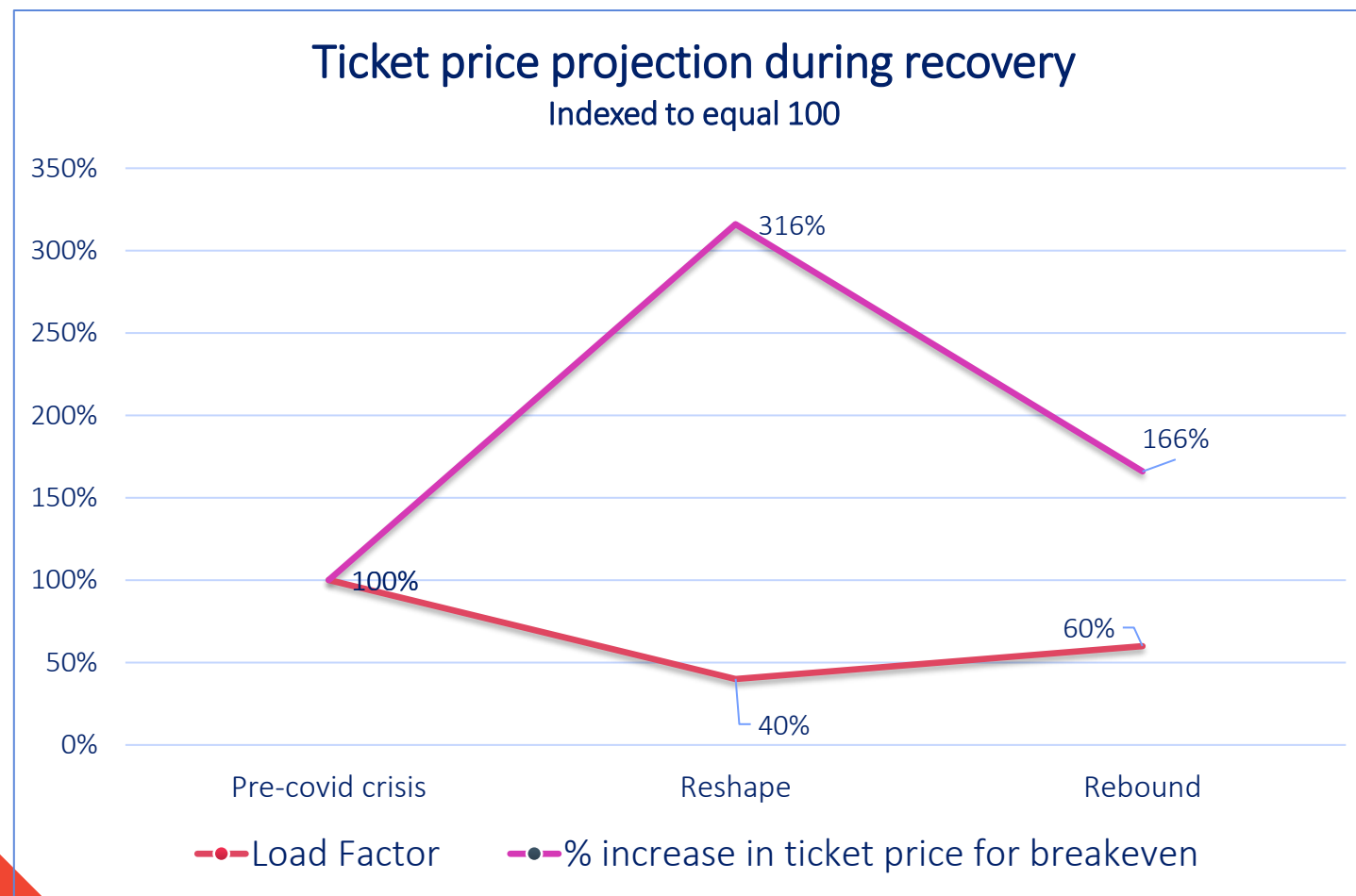
New cost drivers further hike the operating cost

Increased duties and taxes

Operating cost projection during recovery
Indexed to equal 100

- 100%
- 52%
- 40%
- 84%
- 70%

Pre-covid crisis — Reshape — Rebound

Flights Operated — Operating Exp. Projected

Source: Accelya's estimations based on experience

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Financial Projections – Ticket Price

Reduced load factors & increased cost will lead to exponential rise in 'Ticket Price' to achieve break-even

Ticket price projection during recovery
Indexed to equal 100

- 100% (Pre-covid crisis)
- 316% (Reshape)
- 166% (Rebound)
- 40% (Reshape — Load Factor)
- 60% (Rebound — Load Factor)

Legend:
- Load Factor
- % increase in ticket price for breakeven

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How can you improve your cost control processes?

Why do we need to digitize the cost control processes?

✓ Current inefficiencies – Highly manual, verification at a summary level

✓ High cost of processing – Labor intensive, de-centralized operations

✓ No insights into operations with data analytics
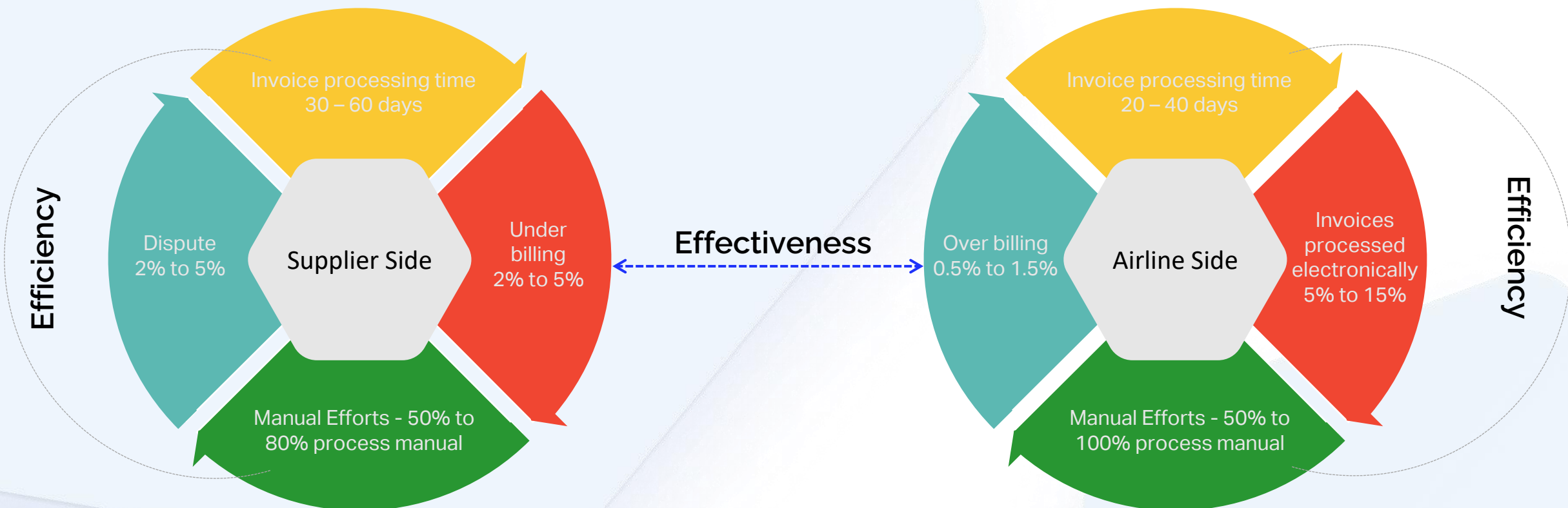
How can we digitize cost control processes?

✓ Automated cost control

✓ Process centralization

Potential benefits

✓ Potential recovery of up to 0.5%

✓ Reduced cost of processing by almost 70%

✓ Potential to streamline contracts through better negotiation / bundling

Operating Cost – Performance Benchmarks

Supplier Side
- Invoice processing time 30 – 60 days
- Under billing 2% to 5%
- Manual Efforts - 50% to 80% process manual
- Dispute 2% to 5%

Effectiveness

Airline Side
- Invoice processing time 20 – 40 days
- Invoices processed electronically 5% to 15%
- Manual Efforts - 50% to 100% process manual
- Over billing 0.5% to 1.5%

Efficiency

Source: Based on Accelya's existing customer data and few POC exercises carried out

High Level Analysis of Supplier Overbilling

Top Reasons for Overbilling

1. Duplicate Billing across multiple invoices
2. Duplicate Billing in same invoice
3. Quantity mismatch/incorrect fuel quantity billed
4. Rate mismatch/incorrect rate used
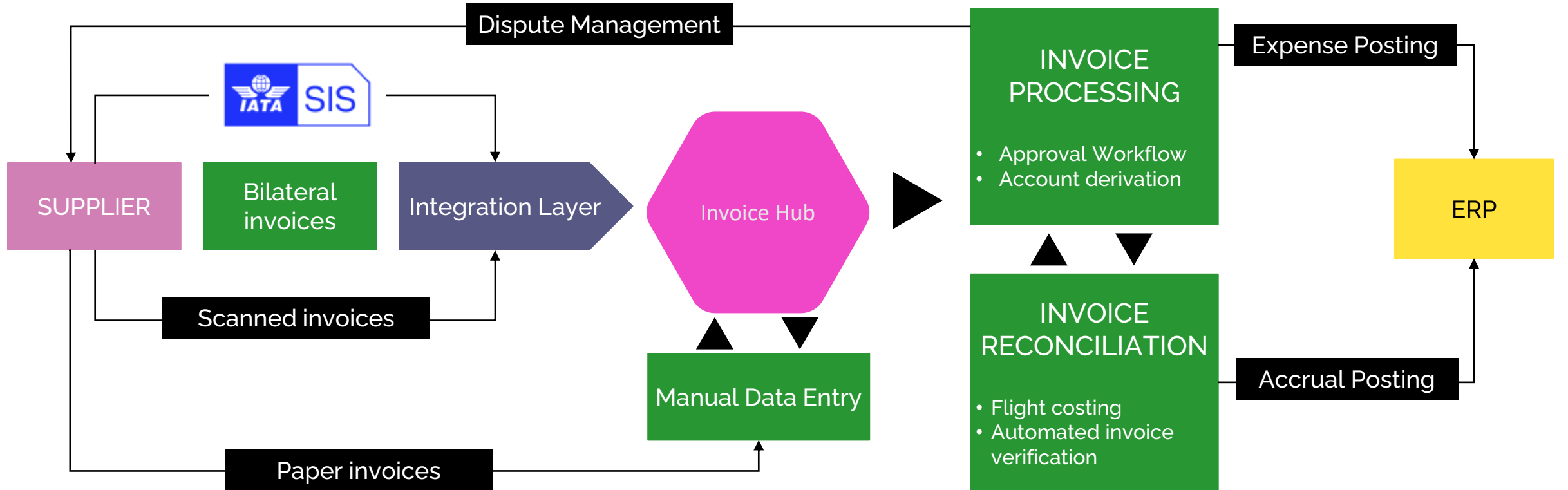5. Rate Driver Mismatch - MTOW, Noise Coefficient, Exchange Rates

Supplier side
(recovery is possible)

6. Possible errors in Ops data

Airline side
(recovery may not be possible)

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Business Objectives - Cost Management Automation

Plug cost leakages

Reduce cost of processing

100% invoice verification

Digital Finance: Transform business process to go digital

Accurate flight costing for route profitability and accruals

Process Flow

SUPPLIER

Bilateral invoices

Integration Layer

Invoice Hub

Dispute Management

Scanned invoices

Paper invoices

Manual Data Entry

INVOICE PROCESSING

- Approval Workflow
- Account derivation

INVOICE RECONCILIATION

- Flight costing
- Automated invoice verification

Expense Posting

Accrual Posting

ERP

©Accelya Group - Commercial in Confidence

Where it all **Starts!**

Cost Control System
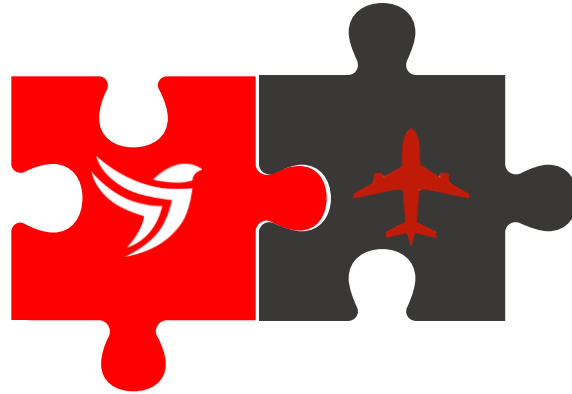
Airline Flight Activities

✈ Simulated Flights

✈ Scheduled Flights

✈ Actual Flights

En-Route

Taxi. Out

Take Off

Off Blocked

Touch Down

Taxi. In

On Block

Parking
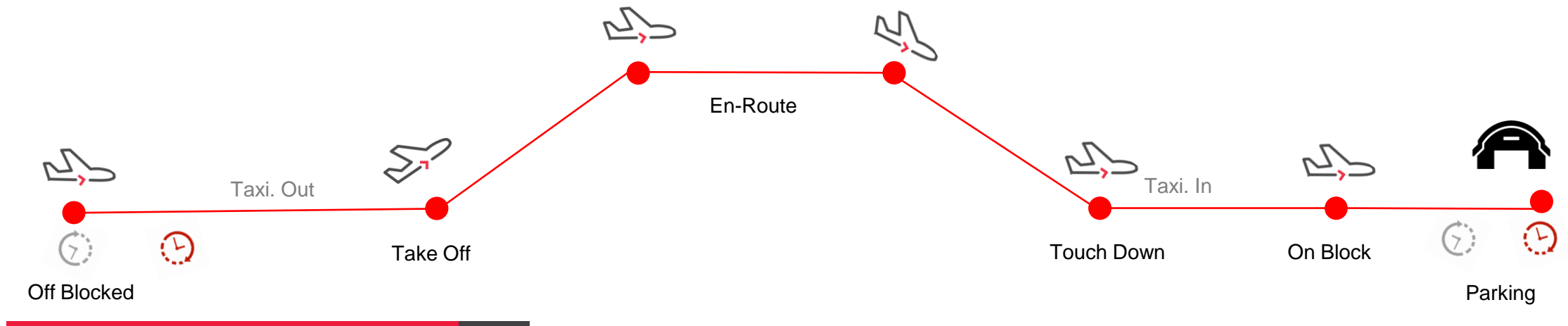
How it is **Built!**
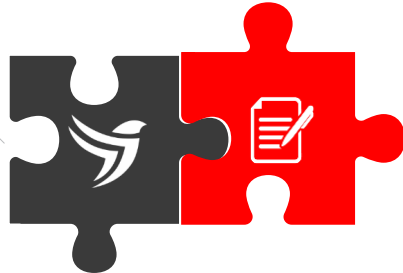
Cost Control System   **Contract Management**

- ✈ airport parameters
- ✈ aircraft parameters
- ✈ flights data
- ✈ Suppliers identification
- ✈ cost identification
- ✈ pricing formula
- ✈ invoice control tools
- ✈ assumptions integration

- ✈ airport charges
- ✈ air navigation charges
- ✈ gov. taxes
- ✈ fuel contract
- ✈ handling contracts
- ✈ catering contracts
- ✈ crew hotac contracts
- ✈ Rental contracts
- ✈ Much more..

STANDARD FEES

	All destinations
0 T to 8 T	52.77 €
9 T to 20 T	116.09 €
21 T to 25 T	116.09 €
26 T to 75 T (per additional T)	5.064 €
> 75 T (per additional T)	6.120 €

NOISE LEVEL COEFFICIENTS

Landing fees and charges depend on aircraft noise level and landing time.
The basic airport landing fee is multiplied by a coefficient, specified below, which is calculated according to the acoustic group of the aircraft and landing time. Acoustic groups are defined by the French Decree issued on 26 February 2009.
If an aircraft group is not declared, the fee will be invoiced at the highest coefficient, i.e. Group 1.

Acoustic groups	Group 1	Group 2	Group 3	Group 4	Group 5a	Group 5b
Daytime and evening 6 AM to 10 PM*	1.394	1.287	1.234	1.073	0.912	0.750

Eg: Airport Public Contract

Public Landing Fees with:
- Rate per Aircraft MTOW range
- Acoustic coefficient
- CO_2 modulation

Cost control system ▶ Exact Cost Calculation per flight with Line Item Details

Know your **Cost!**

Cost Control System

Cost Management

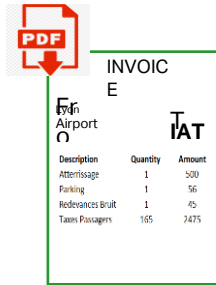|					
✈ **Simulated Flights**	Quote	Assumption	Scenario Analysis		**Simulated Cost Per Flight**
✈ **Scheduled Flights**	Cost Analysis	Re- Forecast	Compare	Budget Plan	**Budget Cost per Flight**
✈ **Actual Flights**	Real Activities Cost Analysis	Cash Flow Measurement	Gap Effects Analysis	Booking Accruals	**Accruals Cost per Flight**

Invoice Control & Reconciliation

PDf Invoice Format V/S Invoice IS XLM Format

Case A – PDF Invoice Format

Facts :

- ✕ Airline Invoice Controller needs to cross-check between the Cost Control System and the PDF invoice received from the supplier

- ✕ Automate control on the Invoice Total Amount when using OCR system

**CASE A
PDF Invoice**

Case B – Invoice IS_ XLM Format

Facts :

✓ If the airline needs to control the invoice, gaps, and reasons on line items details are available.

✓ Automate control and validation on the Invoice line item available

Accruals Cost Calculated							Supplier Invoice Line Item Details				
Date	Flight	Aircraft	Items	Quantity	Cost		Items	Quantity	Cost	Aircraft	Flight
21/09/2022	IAT5678	320 BBB	Landing Charges	1	500	100	Runways Charges	1	600	321 DDD	IAT5678
21/09/2022	ITA5678	320 BBB	Parking Charges	1	56	6	Parking Charges	1	50	320 BB	IAT5678
21/09/2022	ITA5678	320 BBB	Noise Charges	1	45		Noise Charges	1	45	320 BB	IAT5678
21/09/2022	ITA5678	320 BBB	Passengers Facility Charges	174	3654	210	Passengers Facility Charges	184	3864	320 BB	IAT5678

Conclusion

SIS help in financial automation process: Accounting and Cost Accounting with cost control you can achieve more : around 0.5 % DOC savings

Better budgeting, faster month closing …

> Before IS-XML, the cost controller needed ≈20'

> After IS-XML, the cost controller needs ≈30''

In 2019, 6,500 hours were required to handle 13K invoices.

If all invoices were IS-XML, 109 hours would be required

-98% of the Total Handing Time in a year

IATA WORLD FINANCIAL SYMPOSIUM

Thank you

BS3 - Airlines Retailing with Offers and Orders - Impact on Financial Processes - Preview

Konda Reddy – Qantas

Andrei Grintchenko – IATA

Adina Minculescu- IATA

So, what changes with Offers & Orders only?

1. End of pricing delegation to 3rd parties

2. Offers fully controlled by the airline

3. The pricing record of the offer cannot be manipulated by 3rd parties

4. Internal pricing value of each service stored upfront within the Order

5. No reconciliation required between pricing, PNR, E-TKT, EMDs

6. The Order becomes the single source of truth

7. The airline is responsible for data interchange related to Risk Management (Agency validation, Real Time data submission) and reporting to the BSP for settlement processing (legacy transactional reporting or/ and Settlement with Orders)

Order Contexts & Domains

- **Actors / Roles**
  - Blue Boxes

- **Business Functions / Systems**
  - White Boxes

- **Message / Data Interactions**
  - NDC (Blue)
  - One Order (Yellow)
  - Other (Red)

Ordered Order	Delivered Order	Accounted Order
Customer	Passenger	
Seller		
Retailer		
Order Management System		Accounting
	Delivery Provider	
Supplier		
Order Management System		Accounting
	Delivery Provider	

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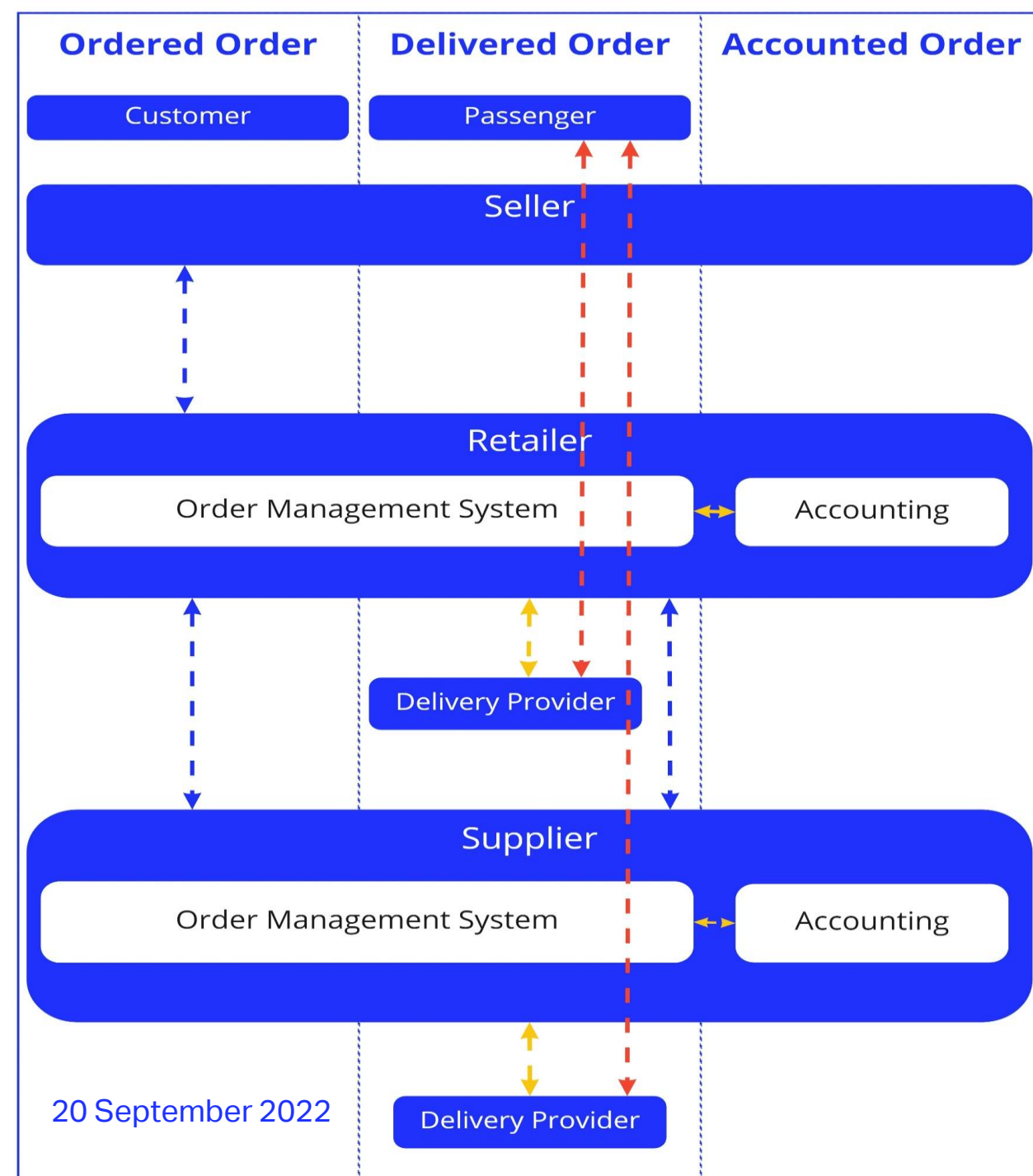
NDC / One Order Messages & Domains

Seller / Aggregator

Retailer

Distribution

Information
- IATA_AirlineProfileRQ
- IATA_AirlineProfileRS
- IATA_AirlineProfileNotifRQ
- IATA_Acknowledgement

Seller Pre-order
- IATA_AirshoppingRQ
- IATA_AirshoppingRS
- IATA_ServiceListRQ
- IATA_ServiceListRS
- IATA_SeatAvailabitlityRQ
- IATA_SeatAvailabitlityRS
- IATA_OfferPriceRQ
- IATA_OfferPriceRS
- IATA_OrderRulesRQ
- IATA_OrderRulesRS
- IATA_OrderCreateRQ

Seller Post-Order
- IATA_OrderRetrieveRQ
- IATA_OrderViewRS
- IATA_OrderReshopRQ
- IATA_OrderReshopRS
- IATA_OrderQuoteRQ
- IATA_OrderChangeRQ

Retailer Post Order
- IATA_OrderChangeNotifRQ
- IATA_Acknowledgement

Utility
- IATA_OrderHistoryRQ
- IATA_OrderHistoryRS
- IATA_OrderListRQ
- IATA_OrderListRS

Delivery

Operations
- IATA_ServiceStatusChangeNotifRQ
- IATA_ServiceDeliveryNotifRQ
- IATA_UpdateServiceNotifRQ
- IATA_ServiceDeliveryRQ
- IATA_ServiceDeliveryRS
- IATA_Acknowledgement

Service Provider

Accounting

Payment or Change
- IATA_ServiceStatusChangeNotifRQ
- IATA_OrderClosingNotifRQ
- IATA_OrderSaleInformationNotifRQ
- IATA_OrderSaleInformationAccountingDocNotifRQ
- IATA_Acknowledgement

Accounting

Interline

Retail
- IATA_InterlineOfferRQ
- IATA_InterlineOfferRS
- IATA_InterlineOrderRQ
- IATA_InterlineOrderRS
- IATA_AirDocNotifRQ
- IATA_Acknowledgement

Supplier

Order Structure

- All Orders are structured the same way.

- Orders have multiple "facets" depending one each message domain.

- The **Ordered Order**; i.e., Data shared between airline and seller, is "Parent" to:
  - The **Accounted Order**
  - The **Delivered Order**

Order   OrderID   Owner   Status

OrderItem   Price   Status

Service   Value*   Status

Passenger Reference

Flight Seg/Leg Reference
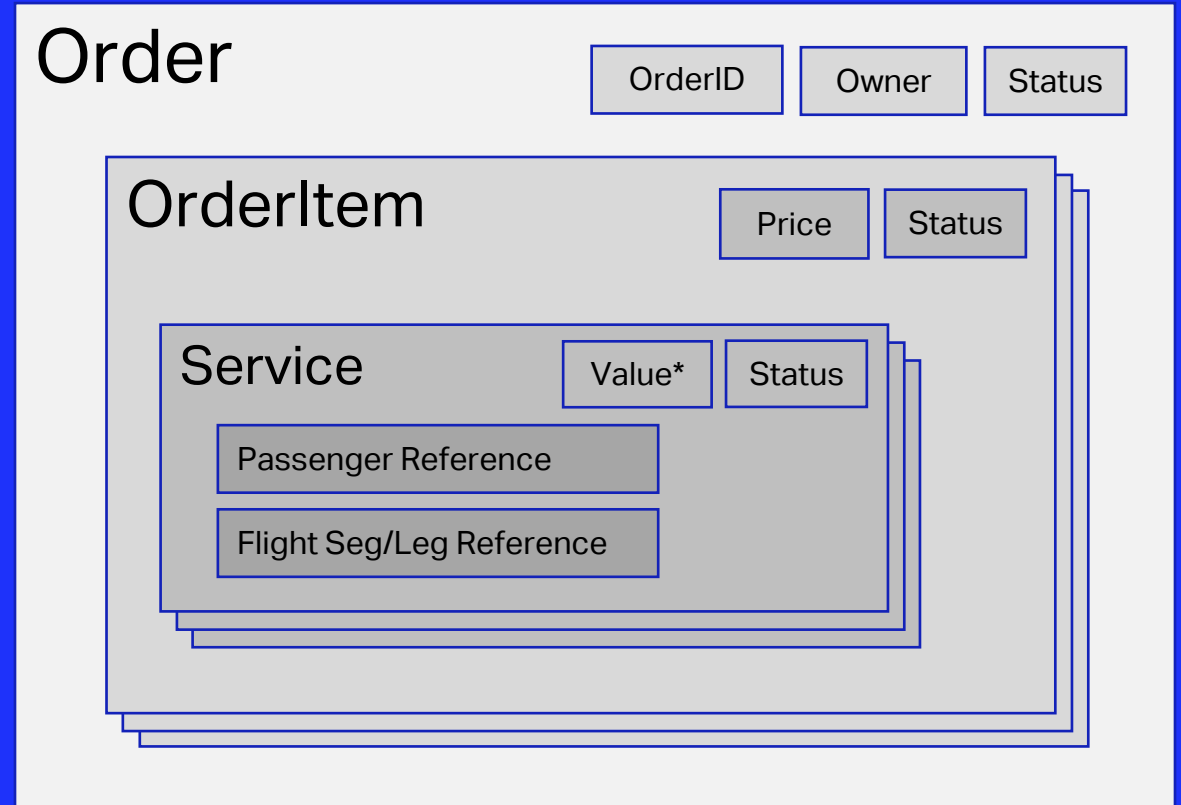
* "Value" at service level is only available within messages in the "Accounted Order" domain

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Ticket Processing

Sale
- Receive new ticket or EMD record via DISH file at ticket level, prorate and post

Change
- Receive reissue ticket or EMD record via DISH file with link to original and/or previous ticket, match and proceed to post

Refund
- Receive Refund Record linked to previous ticket or EMD via DISH file, match and proceed to post

Consumption / Use
- Receive coupon data in lift file, proceed to matching and post

Expiry
- Run closing procedure on open but expired coupons

Status Changes

Sale
- Receive OSIN or OSIADN message with new services, statuses and values at service level and post

Change
- Receive OSIN or OSIADN message with old & new services with new/changed statuses and value differences and post

Refund
- Receive OSIN or OSIADN with services with remove staus and amount to be refunded and post

Consumption / Use
- Receive SSCN with final status change to trigger revenue recognition posting

Expiry
- Receive OCN and close posting

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Accounting Relevant State Change Triggers

OSIN: The Order Sales Information Notification message is used to inform an Accounting System of posting information for Services within an Order.

OSIADN: This message is the same as the Order Sales Information Notification message, but is also capable of transporting Ticket/EMD information.

SSCN: The Service Status Change Notification request message is used by the OMS to inform an Accounting System of the final delivery status of a Service (NB: message shared with delivery domain).

OCN: Order Closing Notification is used to inform an Accounting System that no further updates are to be expected for an entire Order.

OSIN OrderSalesInformationNotif	**OSIADN** OrderSalesInfoAccountingDocNotif
SSCN ServiceStatusChangeNotif	**OCN** OrderClosingNotif

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Forward Sale & Tax Liability Posting

Business State	Description
READY TO PROCEED	▪ Order Management System is in a position to allow a Delivery Provider to prepare a Service. ▪ Customer is entitled to receive a Service. This is typically a trigger for ORA to begin accounting process.
READY TO DELIVER	▪ A Delivery Provider is in a position to start delivery of a Service.

Revenue Recognition and Expiry Posting

Business State	Description
DELIVERED	▪ A service has been successfully delivered.
REMOVED	▪ A Service has been deleted.
NOT CLAIMED	▪ A Service has not been claimed by the Passenger for reasons as a result of Passenger action or inaction. e.g. Passenger no-show, etc.
FAILED TO DELIVER	▪ Service could not be delivered due to Airline's or provider limitations.
UNABLE TO DELIVER	▪ It is not possible for the Delivery Provider to deliver a Service. This could be for reasons of availability, legal or regulatory constraint.
EXPIRED	▪ A service is no longer available for delivery. ▪ A service purchased with an associated time limit for consumption and Service was never claimed. ▪ A service having been at least Confirmed is no longer available as the Customer did not claim the Service within a specific time period, as dictated by the Airline.

Non-Posting Statuses

Business State	Description
IN PROGRESS	▪ The Delivery Provider is in the process of delivering the Service. ▪ There is a universal concept that the "In Progress" status may block any further financial transactions; e.g. refund.

SUSPENDED	▪ Delivery of the Service is suspended as a result of an Airline decision;
	   - Can only revert to the previous status.
	   - Exception is that Suspended may go to "Removed".
	▪ This status may be used in case of fraud detection.

Gaining a Finance perspective on Offers & Orders

Principles for Finance in Future

Orders
- Orders will be owned by airlines
- Orders will always be accurate and up to date
- Orders will be the single source of truth for accounting, settlement and reporting (and more)

Control
- Strong data validation will occur in the offer and order creation process
- Accuracy of offers and orders will be the responsibility of upstream offer & order systems.
- Correction processes will not happen outside of orders

Pricing
- Pricing data will be key to ensuring offers are accurate and orders are complete
- Relevant pricing information will be passed to the order for use downstream, including finance
- Pricing will be split into component values for accounting, reporting and settlement

Settlement
- Settlement will be based on values and data contained in Orders & Order Structures
- Any changes – voluntary or involuntary – will require agreement and acceptance between parties to the Order

Three SIS pillars and what may change in the world of Orders

Billing Processing

Settlement

Legal Invoice Production

➢ Further review work required
➢ May need to transform
➢ May not be required – billing will be based on service level settlement values

➢ Further review work required
➢ May be simplified and enabled with Settlement with Orders standard

➢ Can already be enabled as an optional service to fulfil legal invoicing requirements for Orders

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Optional service
Tax Reporting and Tax Accounting with SIS e-invoicing for Orders

Background

- Airline may need to issue an invoice for collection of dues including VAT or VAT exemption to follow local legal e-Invoicing or tax declaration requirements when using One Order or NDC or SWO or Interline in any forms. IATA can offer as optional service the capacity to fulfill legal requirement for e-invoicing

- Ideally, settlement of those invoices through any means should be in synchronization with the billing cycle. To facilitate VAT accounting, VAT posting and VAT settlement reconciliation.

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Why a centralized invoicing option is required?

- Countries continue to look at ways to reduce Tax/VAT evasion

- Move towards - Real time invoice reporting, sending the invoice first to the tax authority for approval before sending to billed entity

- Complex invoice layouts and reporting formats per country (XML, JSON, PDF etc.)

- Different requirements for the invoice per country (QR code, Digital signature language, data content, etc...)

- Different archiving requirements
  - Different storage timelines
  - Some countries require it to be stored locally

Discussion
and
Next Steps

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Thank you