Value of International E-Services and Potential Roles for IPC

31 October 2010

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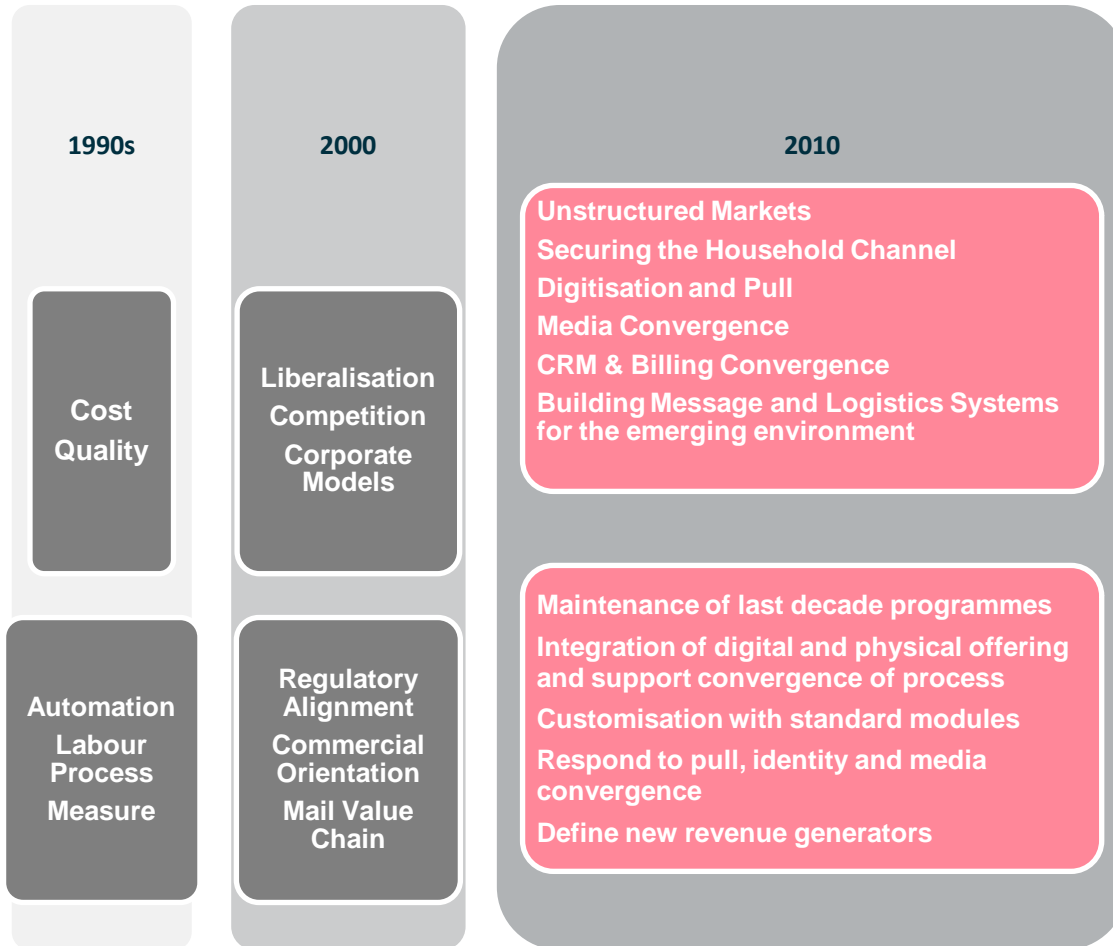
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Innovation and Common Planning Assumptions

Posts that are investing in new service portfolios have largely accepted the following planning assumptions

International **Post** Corporation

- **Expect a scenario with steep mail volume loss, requiring new operating models which will challenge existing assumptions and highlights the need for innovation**
  - Traditional cash cow which has allowed diversification
    - Continued operational restructuring required which can create sustainability, provided a combination of price increase and productivity increase is achieved
  - Permanent erosion of transactional mail through electronic substitution – historic link to economy significantly reduced
    - Media switch now occurring in B2C - online banking is bell-weather indicator
    - Composition and format switch
    - Revenue will need to be replaced
  - Significant competition from other media for business communications mail – link to economy, but weaker ?
    - Below the line advertising growing as a proportion of media spend - 30-40% in developed markets
    - Growing channel competition in below the line - unclear potential of direct mail
    - Volume trend static - key variable for direct mail campaigns: ease, ROI, data utilisation
  - Recognition of implications of pulled-based messaging systems and receiver demands for information management

- **The USO mandate is weakening, and digital access is the new demand, so relevance in the digital world is critical**
  - Expectation that USO redefinition will relieve cost burdens but also reduce relevance

- **Growth in parcels and logistics requires investment, information and innovation to keep ahead of the competition**
  - Margins will not replace Letter mail however
    - Owning the household channel though integration of logistic payment and information flows - critical
    - Operational excellence – the postal operator must win this
    - Differentiated market models and offerings: B2B, B2C, small and home business
    - Customer service: "I want my eShopping NOW and FREE"

- **Posts must find ways of exploiting electronic media by giving greater choice and ease of access to customers**

The Postal Journey : Identifying and Meeting the Challenges

International Post Corporation

Leading Posts have successfully adapted to significant external change over the last decade. The core challenges related to driving productivity and profitability in liberalising, low growth markets. The emerging environment is characterised by slow growth macro economic environments and significant changes in communication behaviours. Core business efficiency will be critical but not sufficient to maintain Posts' value and financial position. The latter will only be achieved through service diversification which follow the principles of changing patterns.

1990s

Cost Quality

Automation Labour Process Measure

2000

Liberalisation Competition Corporate Models

Regulatory Alignment Commercial Orientation Mail Value Chain

2010

Unstructured Markets
Securing the Household Channel
Digitisation and Pull
Media Convergence
CRM & Billing Convergence
Building Message and Logistics Systems for the emerging environment

Maintenance of last decade programmes
Integration of digital and physical offering and support convergence of process
Customisation with standard modules
Respond to pull, identity and media convergence
Define new revenue generators

Principles for Service Innovation

Consumers

- *Content* - relevant to individual
- *Control* - what where when how
- *Confidence* - in security & identity
- *Convenience* - simplification of transactions and interactions
- *Confidential* - information privacy

Businesses

- Managing multi-media
- Integration of CRM/ERP with consumer messaging requirements
- Targeting and individualisation
- Security of communications
- Cost and effectiveness

The Market Challenge to Posts

International Post Corporation

Traditional demands are changing
- Fragmentation of traditional product markets
- Different drivers, costs and requirements by sub-markets
    - Direct Mail and Transactional Mail, Express and Home Delivery
- Different direct and indirect competition by sub market
    - Transactional Mail - pull systems
    - Direct Mail- broadcast advertising/new media

Significant changes in process and technologies
- Convergence of media to meet similar demands
    - Mail and/or digital
- Integration of media to meet demands
    - DVD/Mail
    - Text/Parcels/Marketing

Radical Changes in Postal Regulation
- Liberalisation of core markets
    - EU Directive
    - Wholesale markets
- Universal Service
    - Definition/Requirements/Service Levels
    - Responsibility and Funding

Postal Business Development Issues
- Clarity of shareholder mandate
    - Mail utility – asset return model
    - Communications logistics business- profit maximising
- Financial Position
    - Performance
    - Capacity - ability to raise /use capital
    - Expectation, Forecasts, Scenario
- Strategic Perspectives
    - Agreement of new needs based market definitions
    - Clarity on future position/value proposition
    - Resources and competences for development?
    - What are local market conditions

Historic Market Definitions	Current Needs Based Definitions
Letters	• Transactional/administrative mail • Direct marketing • Transpromo • Periodicals • Packets • Data and document management • Integrated digital and physical delivery • Identity and authorisation
Parcels	• Express • E-Commerce/fulfilment • Home delivery • Logistics and supply chain • Trust security
Counters	• Citizen services • Transaction management • Financial services • Retail

Postal Strategic Choices

Posts are using wider market definitions - a variety of different positions are emerging based on corporate ambition, owner mandate and local market conditions. Few posts are pursuing expansionary positions in all markets, constrained by market opportunity, owner ambition financial and managerial capacity.
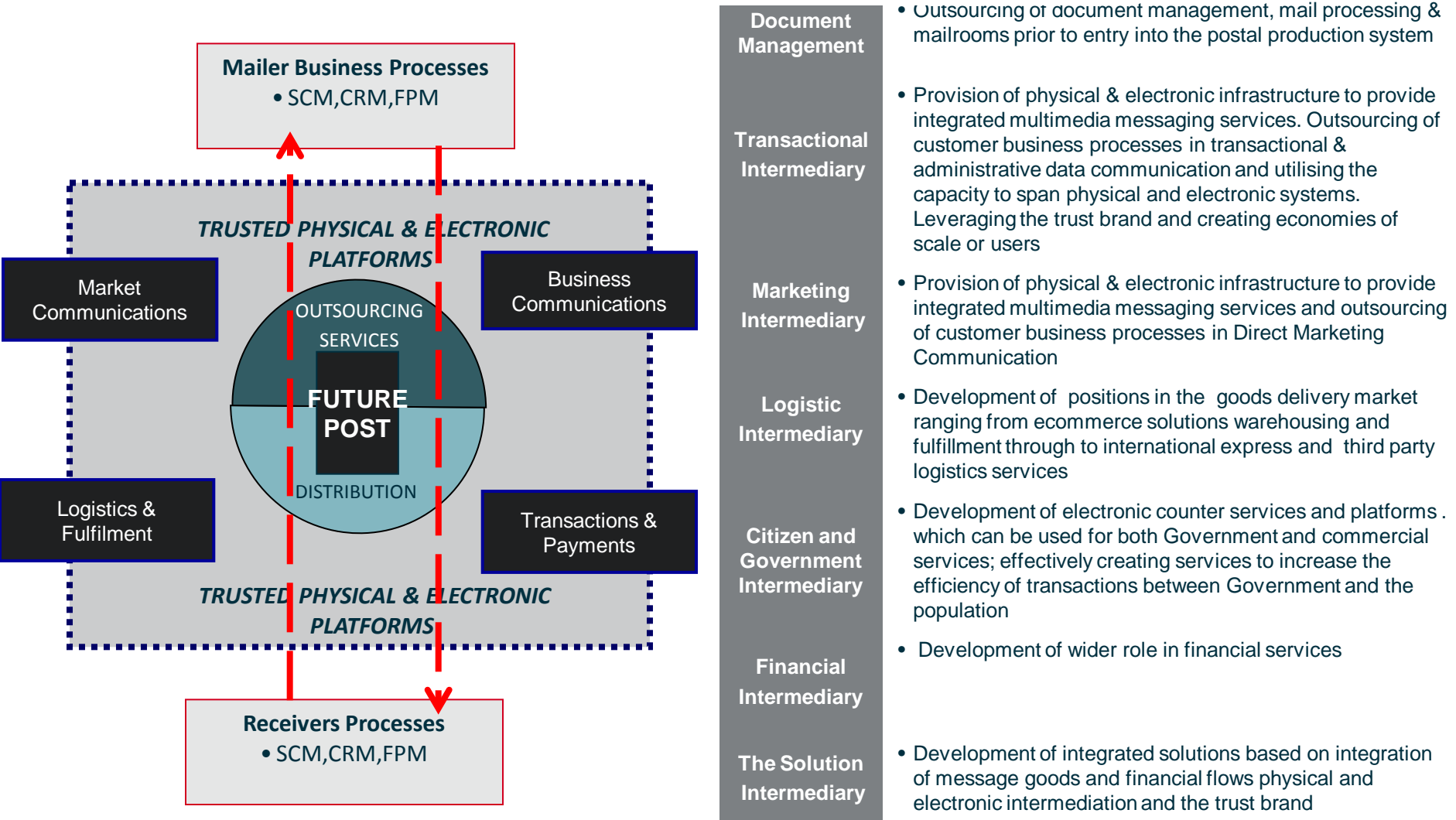
International **Post** Corporation

		Positional Postal Wanted Positions		
		Traditional	**Extension**	**Expansionary**
Letters	**Mailing Services**	*Last Mile*	*Core Post*	*Document Manager*
	Transaction Comms	*Enhanced Mail Delivery*	*Bridge Post*	*Multi-Media Intermediary*
	Marketing Comms.	*Enhanced Mail Delivery*	*Market Maker*	*Data &Campaign Management*
Parcels	**Express**	*USO*	*Enhanced Domestic*	*Integrator/ Partnership*
	E-Commerce Solutions	*USO Parcels*	*Home Delivery*	*E-Commerce Solutions*
	Logistics	*Heavy Freight*	*Cross Dock*	*TPL/FPL*
Counters	**Retail**	Counters	Channels	Portals
	Citizen	*Counters & Delivery*	*Web Post*	*Multi- Media Service Provider*
	Financial Services	*Transactions*	*Third Party*	*Banc Assurance*
Growth	**International**	_	*Regional*	*Global*
	Solutions	_	_	*Sector Integrator*

Posts are developing very different positions in these new unstructured markets

- Key postal Issues
  - Which markets?
  - What positions?
  - How credible?
  - Competences?
- Posts
  - Where are we now?
  - Where do we want to be?
  - What's the gap
  - Road Map?

- Key Criteria
  - Shareholder mandate
  - Regulation
  - Local markets opportunities
  - Customer demand
  - Gap
  - Resource requirements
  - Competence acquisition
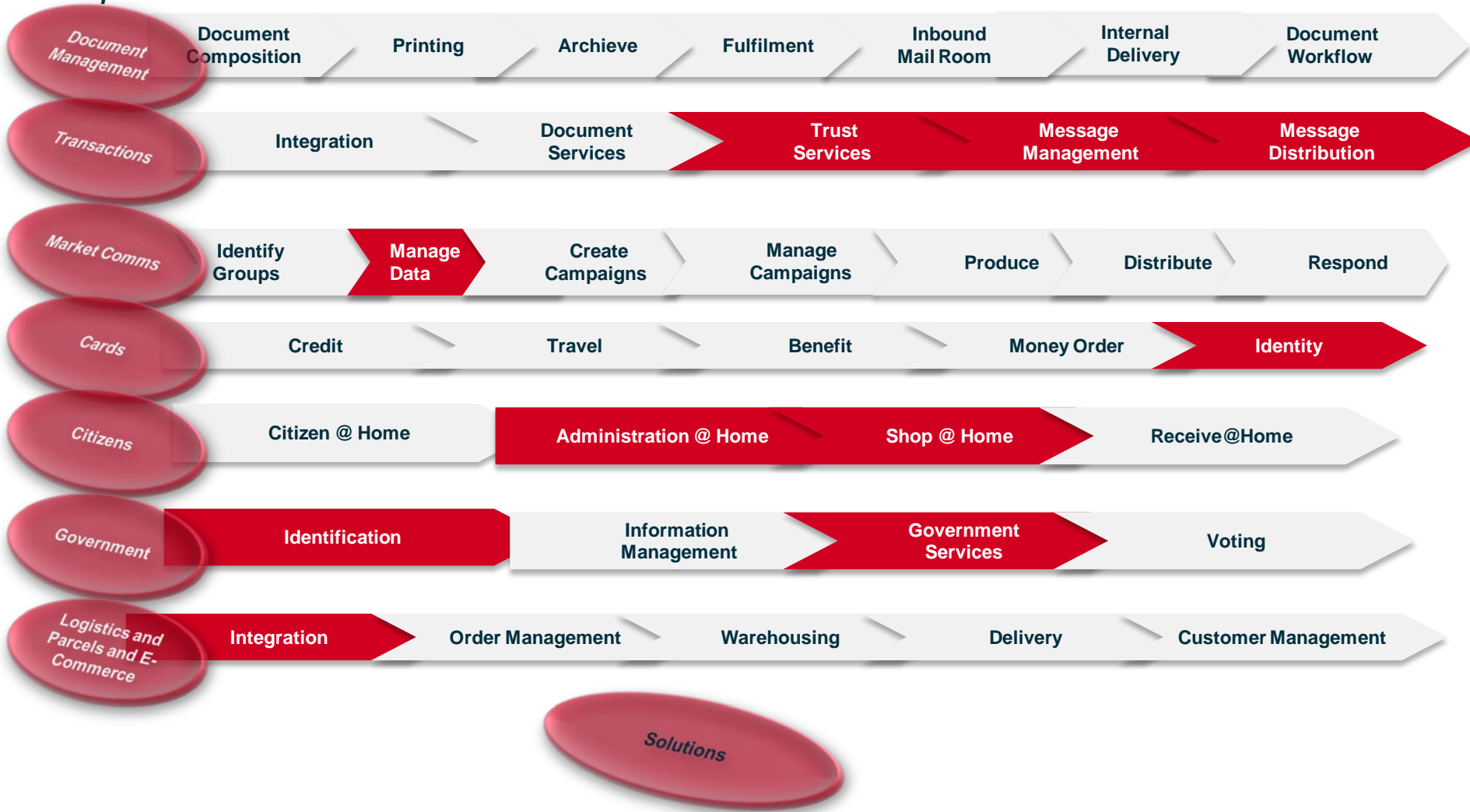 - Returns
  - Practicality
  - Capability

Future Markets, Positions and New Technology Based Services

Posts are responding to these market changes by developing services in the following market spaces integrating traditional and digital platforms to meet new communications needs and to replace revenue being lost in traditional products

International Post Corporation

Mailer Business Processes
• SCM,CRM,FPM

TRUSTED PHYSICAL & ELECTRONIC PLATFORMS

Market Communications

Business Communications

OUTSOURCING SERVICES

FUTURE POST

DISTRIBUTION

Logistics & Fulfilment

Transactions & Payments

TRUSTED PHYSICAL & ELECTRONIC PLATFORMS

Receivers Processes
• SCM,CRM,FPM

Document Management	• Outsourcing of document management, mail processing & mailrooms prior to entry into the postal production system
Transactional Intermediary	• Provision of physical & electronic infrastructure to provide integrated multimedia messaging services. Outsourcing of customer business processes in transactional & administrative data communication and utilising the capacity to span physical and electronic systems. Leveraging the trust brand and creating economies of scale or users
Marketing Intermediary	• Provision of physical & electronic infrastructure to provide integrated multimedia messaging services and outsourcing of customer business processes in Direct Marketing Communication
Logistic Intermediary	• Development of positions in the goods delivery market ranging from ecommerce solutions warehousing and fulfillment through to international express and third party logistics services
Citizen and Government Intermediary	• Development of electronic counter services and platforms . which can be used for both Government and commercial services; effectively creating services to increase the efficiency of transactions between Government and the population
Financial Intermediary	• Development of wider role in financial services
The Solution Intermediary	• Development of integrated solutions based on integration of message goods and financial flows physical and electronic intermediation and the trust brand

Innovation Markets: Summary Interactions and Competences

Posts are innovating in eight principle innovation spaces and in some 50 innovation areas with upward of 250 different specific service ideas which can be identified. The majority of which are either being operated or trialled by postal operators around the world. The ones identified in red are ones prioritised in discussions with IPC members.

Document Management: Document Composition → Printing → Archieve → Fulfilment → Inbound Mail Room → Internal Delivery → Document Workflow

Transactions: Integration → Document Services → **Trust Services** → **Message Management** → **Message Distribution**

Market Comms: Identify Groups → **Manage Data** → Create Campaigns → Manage Campaigns → Produce → Distribute → Respond

Cards: Credit → Travel → Benefit → Money Order → **Identity**

Citizens: Citizen @ Home → **Administration @ Home** → **Shop @ Home** → Receive@Home

Government: **Identification** → Information Management → **Government Services** → Voting

Logistics and Parcels and E-Commerce: **Integration** → Order Management → Warehousing → Delivery → Customer Management

Solutions

Innovation Starting Points

- That physical mail and parcel market are changing and that communication, payment and goods management pattern will change significantly over the medium to long term with increased emphasis and integration of physical and electronic systems

- That service diversification will be predicated on the back of efficient and well regarded traditional services - critical for stakeholder credibility

- That the post's traditional value in the economy has been as a trusted intermediary .

- That posts want to compete in the wider unstructured markets as defined earlier

- That markets and behaviours will change significantly whether the post participates or not and that cannibalisation arguments are to some extent simply diversions. There will need to be a restructuring of the balance between physical and electronic distribution, the nature of physical distribution and the definitions of universal service

- That there will be at least an implicit owner mandate to support growth and that along with social responsibilities the owner wants to see long term value creation and operational sustainability

- That acquisition partnership and joint ventures are a way of developing the competences required to create the new service portfolio

- That needs must be prioritised as all areas cannot be developed at once

- Realistic assessment of resource availability

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IPC e-Service Challenge

The roles that IPC can play in e-Services should to some extent mirror its existing roles and responsibilities of providing technical and commercial integration between posts and catalysing best practice and innovation within its members
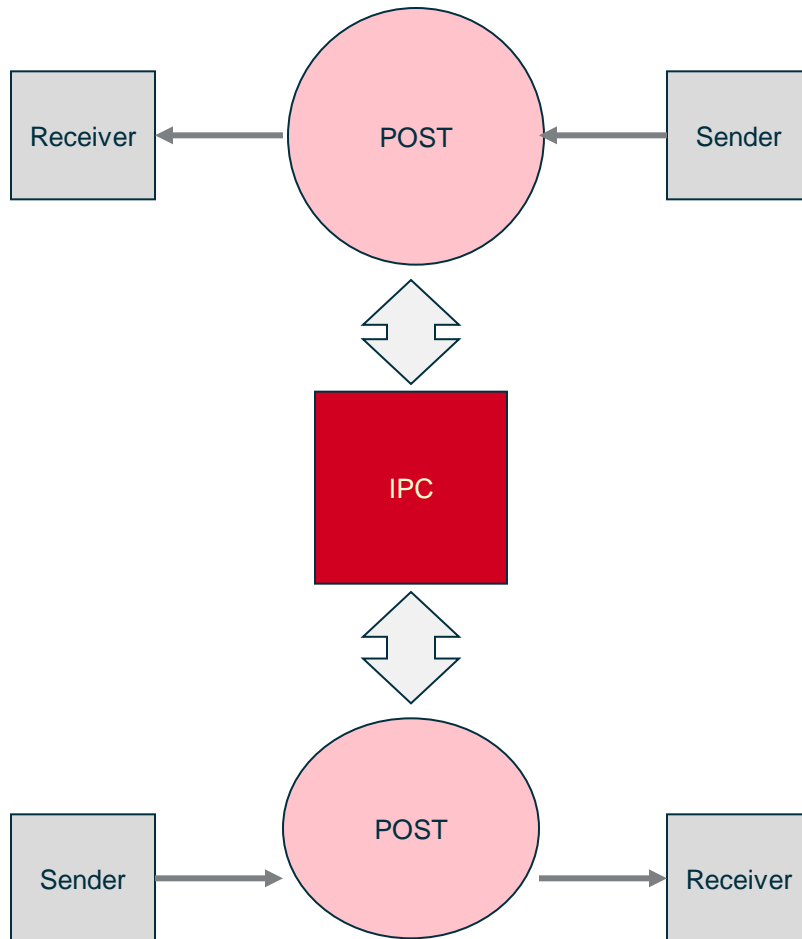
- IPC cannot develop services which compete with members by directly accessing posts' customers

- The role is to support the international aspects of national postal services

- Create international infrastructures which enhance members' services and thereby create volumes and revenues for the participating posts

- Enhance members' domestic services by creating reliable international service dimensions

- Create quality standards within the service area

- Provide information services which support quicker international adoption of new services by members and mailers

- Reconcile the fact that not all members are innovating at the same rate or have the same strategic interest or opportunity. Therefore not all members will require the same level of services

- Recognise that inter-postal competition is becoming a stronger organisational drive than multilateral co-operation

IPC Current Skills and Competencies

IPC Strengths: Acknowledged technical expertise, industry platform, multinational, proven track record in driving performance improvement, source of knowledge, successful in cross border business development activity, setter of international standards. These values and competences are the basis for defining an international role and position.

Operator Role:

- Industry Initiatives
- Technical Operations
- Technical Support

Facilitator Role :

- Product & Service Development
- Performance Management
- Auditing & Standards

Catalyst Role :

- Senior Executive Forums and Best Practice Seminars
- Research & Benchmarking
- Conferences & Education
- Provision and exchange of Information

Technical Infrastructure: Unex systems, Cape systems, Diagnostic Support, RFID

Operational Facilitation: IPC Customer Service System, MEDICI

Industry Development: Prime, IDM, EPG, Future of Mail by Air, Postal Sector Sustainability, IPC Management Training

Performance: Upgrading International Letter Services, Ops Audits, Item Monitoring Services, Parcels Performance Centre, Upgrading Group

Interoperability: IPC Tray Pool, IPC Mail Bag Pool, REIMS system, CEN,ISO & UPU Standards Activities, SAMPLE

Industry Intelligence: IPC Global Industry Report, IPC Carrier Intelligence, IPC Statistical Database, IPC Market Audits, research and market analysis, Regulatory research.

Media Communications and Publications: Market Flash, Green Flash, Strategic Perspectives, Strategic Insights, IPC Web Centre

IPC Potential Strategic Roles in e-Services: Definition

Based on the starting principle outlined above it is possible to define four core generic roles IPC can undertake to support members in developing international electronic services. Within each broad area, there are a number of potential roles and each will have to be defined for each specific service.

4.   Electronic Operator

- Complementary Services
- Technical Operations
- Technical Support
- New Product Development

3.   Electronic Facilitator

- Interconnection
- Quality Performance Management
- Auditing & Standards
- International Lobbying

2.   Electronic Catalyst

- Benchmarking & Standards
- Conferences & Education
- Information Provision

1.   No Role

Potential IPC Strategic Framework

The strategic framework below, summarises the GENERIC roles that IPC could take in relation to new services

International **Post** Corporation

Post Digital Service and Ambitions		E-box	E-ID	E-COMMERCE	E-other.	
	Complementary Services					Electronic Operation
	Technical Solutions					
National Post	New Product Dev.					Electronic Facilitation
↕ IPC Future e-Position →	Quality Performance					
	Standards/ Audit					
National Post	Benchmarking					Electronic Catalyst
	Information Provision					
	No Role					
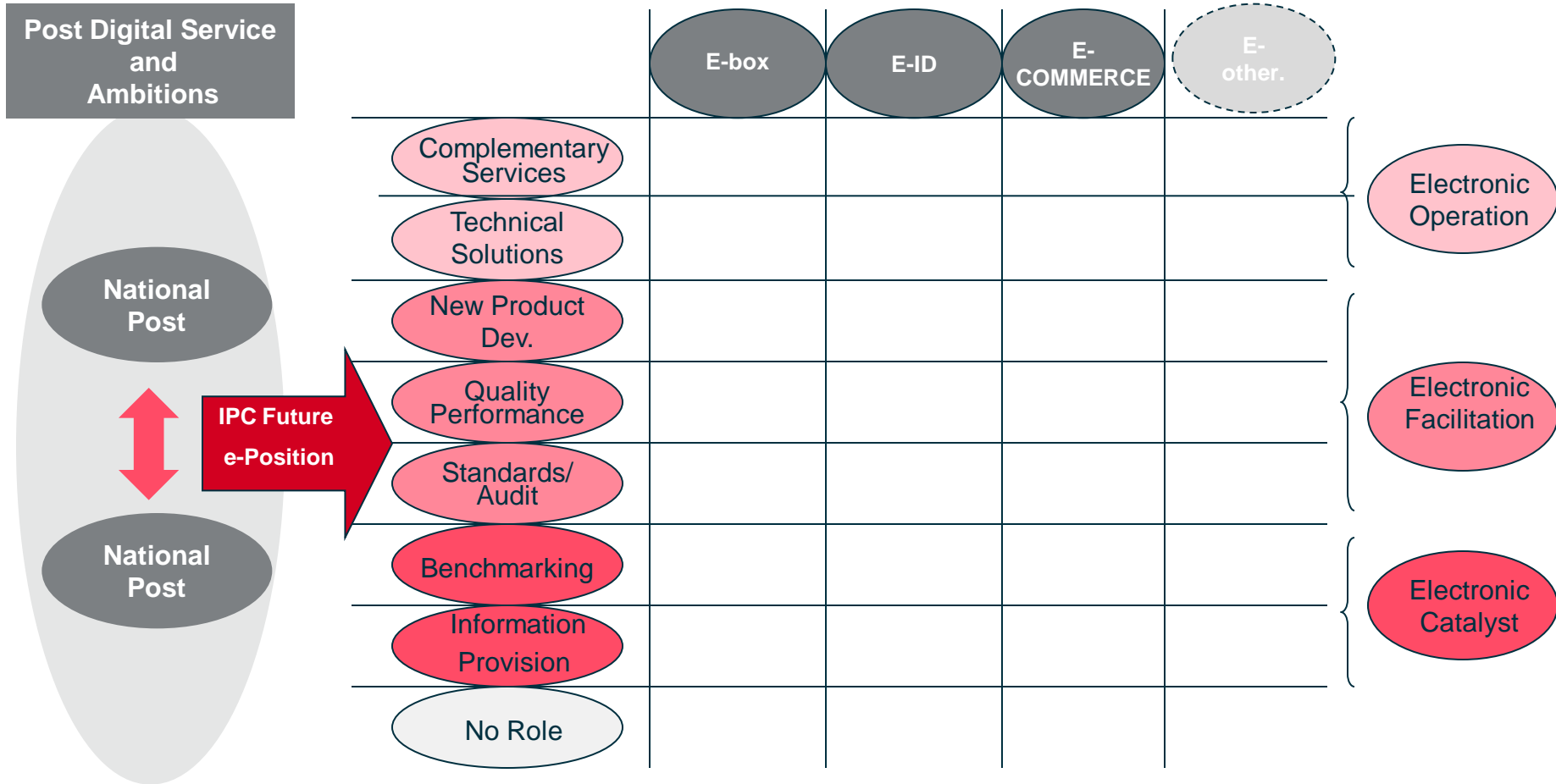
IPC Potential Strategic Roles in e-Services: Electronic Catalyst

The catalyst role focuses on IPC providing a range of information services based on building a digital competence centre which supports a range of information services on best practice, trends and technology solutions.

International **Post** Corporation

Role	Function	Core Service
Electronic Operator	Complementary Services Technical Operations Technical Support New Product Development	
Electronic Facilitator	Quality Performance Management Auditing & Standards International Lobbying	
Electronic Catalyst	*Benchmarking & Standards* *Conferences & Education* *Information Provision* *Information Exchange*	• IPC provides detailed commercial and technical status reports focusing on three areas: current software functionalities and developments; hardware functionalities and developments; service feature development for a given technical service area. • IPC provides conferences, reports, newsletters and information services for international mailers to inform them of the multi-country capability of the posts within a service area and how they are being developed into internationally consistent services. IPC develops a quasi-marketing role for member post services
No Role		

Implementer

Audit

Advisory

Awareness
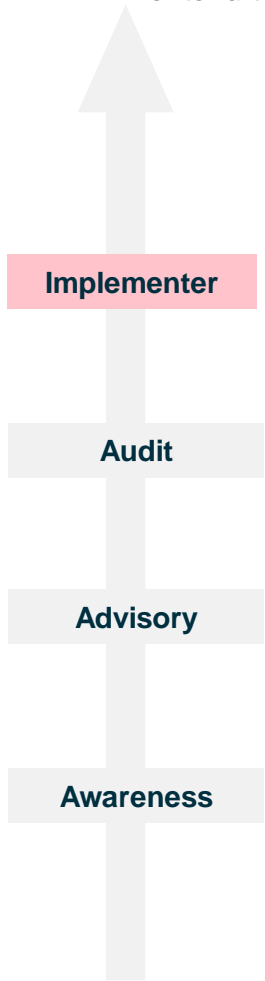
IPC Potential Strategic Roles in e-Services: Electronic Facilitator

The facilitator role focuses IPC on providing services which enhance the quality and efficiency of interoperability between domestic systems. This role could be developed by creating common or accepted operating procedures, auditing, quality approvals and commercial arrangements.

International Post Corporation

Role	Function	Core Service
Electronic Operator	Complementary Services Technical Operations Technical Support New Product Development	
Electronic Facilitator	*Quality Performance Management* *Auditing & Standards* *International Lobbying* *International Interconnection*	• IPC takes the role to define and jointly set quality standards and establish commercial agreements on quality & pricing , technical interoperability f formats and protocols, and then ensures the effectiveness of the performance agreements through measurement • IPC undertakes service audits and provides members with a benchmarking service which allows them to monitor comparative quality performance • IPC takes a lobbying role on behalf of members in relation to international regulation , government directives etc and seeks to ensure that the Postal companies views and service offers are taken into account in emerging e-Service and digital markets
Electronic Catalyst	Benchmarking & Standards Conferences & Education Information Provision Information Exchange	
No Role		

Implementer

Audit

Advisory

Awareness

IPC Potential Strategic Roles in e-Services: Electronic Operator

International Post Corporation

The operator role would see IPC run specific operational capacity to support member posts develop services. The most likely role would be to support technical inter-operability; however the role could extend to running outsourced operation or development services

Implementer

Audit

Advisory

Awareness

Role	Function	Core Service
Electronic Operator	***Complementary Services*** ***Technical Operations*** ***Technical Support*** ***New Product Development***	• The most likely operator role is to provide a technical infrastructure that assists in linking operators' domestic services. This could include common platforms, message routing services or facilitating integration between members countries e-service databases • Provision of technical expertise and resources to create common economies of scope and scale whilst services are merging • Development of new product concepts to include definition of technical and commercial standards where IPC could take the a number of different roles • International Product Management to support common domestic implementation • International Marketing to end customers • Provision of common technical platforms to drive economies of scale and scope provide to Member Posts on an ASP basis
Electronic Facilitator	Quality Performance Management Auditing & Standards International Lobbying	
Electronic Catalyst	Benchmarking & Standards Conferences & Education Information Provision Information Exchange	
No Role		

IPC Potential Strategic Roles in e-Services: Summary

The challenge for the Digital Business Strategic Group is to define which roles are most likely to add value to Members' innovation ambitions:

Role	Function	Core Service

Electronic Operator	Complementary Services Technical Operations Technical Support New Product Development	• The most likely operator role is to provide a technical infrastructure that assists in linking operators' domestic services. This could include common platforms, message routing services or facilitating integration between members countries e-service databases
		• Provision of technical expertise and resources to create common economies of scope and scale whilst services are merging
		• Development of new product concepts to include definition of technical and commercial standards where IPC could take the a number of different roles
		   • International Product Management to support common domestic implementation
		   • International Marketing to end customers
		   • Provision of common technical platforms to drive economies of scale and scope provide to Member Posts on an ASP basis

Electronic Facilitator	Quality Performance Management Auditing & Standards International Lobbying	• IPC takes the role to define and jointly set quality standards and establish commercial agreements on quality & pricing interoperability, and then ensures the effectiveness of the performance agreements through measurement • IPC undertakes service audits and provides members with a benchmarking service which allows them to monitor comparative quality performance • IPC takes a lobbying role on behalf of members in relation to international regulation , government directives etc and seeks to ensure that the Postal companies views and service offers are taken into account in emerging e-Service and digital markets
Electronic Catalyst	Benchmarking & Standards Conferences & Education Information Provision and exchange	• IPC provides detailed commercial (?) and technical status reports focusing on three areas: current software functionalities and developments; hardware functionalities and developments; service feature development for a given technical service area. • IPC provides conferences, reports, newsletters and information services for international mailers to make them aware of the multi-country capability of the posts within a service area and how they are being developed into internationally consistent services. IPC develops a quasi-marketing role for member Posts' service
No Role		

IPC Potential Strategic Roles in e-Services: Member Suggestions

During the telephone discussions in August, members suggested the following potential roles

International **Post** Corporation

Position		Service Concept	US	IT	NL	DE	CH	NO	UK
Electronic Operator	12	Take lead role inn looking at applications and relationships with emerging service platforms e.g. IPhone					x		
	11	Support postal certificates to be recognised by other international sectors-airlines customs etc			x				
	10	Creation of e-commerce trust sited to facilitate cross-border ecommerce			x				
	9	Creation of technical and process system to enable the multilateral interconnection of domestic digital authentication and identity systems	x		x	x			
Electronic Facilitator	8	Leading lobbying role for the Postal Sector in international regulatory and legal issues				x			
	7	Defining product standards and processes connected with digital mail	x						
	6	Development of expert competence centre on the legal and regulatory requirements and developments in authentication and messaging services				x			
	5	International Standards, IPC to lead process to define acceptable minimum international technical and process standards to support multilateral interconnection of systems to include identities, formats and processes	x		x	x	x	x	x
Electronic Catalyst	4	Advice on digital product development through creation of an international competence centre	x						
	3	Comparing and understanding customer need by county and internationally		x					
	2	Information Provision- IPC to provide updates and analysis on Postal developments in digital service areas	x	x	x	x			x
	1	Information Exchange- creation of formal programme of information sharing between Posts		x					
No Role									

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eBox Market and Service Description

	Description
Market Definition	• Collection and distribution of messages in an E2E format between authenticated users. Can be utilised for all message types and creates the ability for the post to offer a range of value-added services to both senders and receivers
Postal Services	• eBox 　　• Secure mail based on authenticated users, addressing format related to some form of personal identity • Digital Street Address 　　• Secure mail but based around digitalising street addresses
Service Features	• Authenticated users • Secure identification process – possibly with certification • Deliver messages in preferred format or multiple formats • Draws on hybrid and message switch skills • Multimedia address management capability • Secure delivery • Archive and search features • Potential development of a range of value added services 　　• Personal management application service provider (ASPs) 　　• Government applications 　　• E-commerce 　　• Permission marketing 　　• Marketing data analytics

IPC Member Posts Current eBox Status

Many IPC members have introduced eBox concepts. However whilst the concept of authenticated e-presentation of mail is broadly comparable, there are many variations in terms of the registration process, service positioning and technical platforms.

International **Post** Corporation

Indicated in pink are services offering only elements of eBox services

Post	eBox Services Status	Comments
An Post	Planning	• Reviewing e-Citizen concepts
Australia Post		
Canada Post	Established	• Extended EBPP offer • Online authentication
Correos		
CTT Correios de Portugal	Established	
Cyprus Post		
bPost	Established	• Services offered within the Certipost business
Deutsche Post DHL	Introduced	• Authenticated users • eBox model • Face to face
Hellenic Post ELTA		
Iceland Post		
Itella	Established	• Authenticated User • eBox model • Uses bank identity
Groupe La Poste	Introducing	• Digiposte service launching Fall 2010

Post	eBox Services Status	Comments
Magyar Posta		
New Zealand Post	Planning	• Exploring around the concept of digital street address
Norway Post	Planning	• Exploring authenticated closed systems based on multiple identification options
Österreichische Post	Introduced	• Acquisition-led • Initial focus around registered mail
Poste Italiane	Established	• Authenticated users • eBox model – Multi services • Face to Face
P & T Luxembourg	Planning	• Exploring around eBox
Posten Norden	Established	• Authenticated user • eBox model • Uses bank identity
Royal Mail Group		• Exploring authenticated user model linked to digital letter box
Swiss Post	Established	• Suite of identity and secure services
TNT	Established	• Electronic presentation to receivers bank site for invoices only EBPP
USPS	Planning	• Reviewing digital street address concepts

IPC Potential Roles: eBox

The Postal sector is beginning to build domestic services, whilst they are broadly designed on a common theme and principles there are significant variations in the detail of the service offer and the underlying operational procedures and process. There appears to be a requirement to increase knowledge and create processes which would support international interoperability between these domestic systems

International Post Corporation

Role	Function	Core Service
Electronic Operator	Complementary Services Technical Operations Technical Support New Product Development	1. IPC provide a network service which would ensure that message are routed securely between Postal systems. 2. IPC would monitor message performance and integrate with CA services
Electronic Facilitator	Quality Performance Management Audit Standards Define Technical and Process Standards International Lobbying	1. IPC to develop acceptable minimum interoperability standards and commercial agreements to support international infrastructures whilst maintaining the integrity of domestic value propositions 2. IPC develop strong competence in legal/ regulatory issues to provide both an information and lobbying function for members in the digital service area
Electronic Catalyst	Benchmarking & Standards Conferences & Education Information Provision	1. Survey and analysis report of software systems, functionalities & services 2. Provide information service to spread best practice on commercial and adoption strategies
No Role		

Implementer

Audit

Advisory

Awareness

IPC Potential Roles: eBox

The model utilised has four strategic positions. The strategic position embraces a number of potential services:

Role	IPC Service Role	Demand	Why IPC	Value to Member
Electronic Operator	1. IPC provides a network service which would ensure that message are routed securely between postal systems. 2. IPC would monitor message performance & integrate with Certification Authority services	• Enhanced performance of operations • Increased security	• Extension of current technology skills & international integration role	• Outsourcing, efficiency & enhanced performance
Electronic Facilitator	1. As Posts develop message services, IPC develops acceptable minimum interoperability standards and commercial agreements to support international infrastructures whilst maintaining the integrity of domestic value propositions.	• Required to create interoperability • Knowledge of other services increases confidence	• Extension of existing role	• International operating framework
Electronic Catalyst	1. IPC provides survey and analysis reports of software systems, functionalities & services 2. IPC provides information on message switching for Posts in terms of service offers and technology suppliers. This service could be expanded into a conferencing and support network if more of the Posts start to develop these services	• Vendor-independent reviews • Increase knowledge • Posts just starting to develop these areas	• Neutral Postal enterprise • Builds on information provision best practice benchmarking and senior executive forum programme	• Increased knowledge • Information dissemination • Neutral benchmarking and best practice reference data
No Role				

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e-Identity and Security Market Definition and Description

The dominant identity business idea to be raised by the posts is of the post providing electronic certificates, which can be used in multiple application and replaces the need for multiple logon identities. In addition there is some interest in address fraud management

	Description
Market Definition	• The authentication and management of identities of individuals and companies to create greater security in e-communication and commerce markets and the provision of services which increase user confidence in digital identity and content

Postal Services and Service Features	1. **Certification Services**
	  • Provision of digital certificates
	  • Post act as Certification Authority registering, issuing and managing digital identities which will be accepted by various authorities and companies as a validated identity which can be trusted to be used within their applications
	  • Utilisation of Trusted Third Party processes and PKI technology
	  • Demand perceived to be growing
	    • Replace multiple log on identities
	    • E-Government and E-Commerce applications
	    • C2C –E-Bay market
	    • Cloud computing and growth of ASP accessed from multiple and mobile locations
	  • Post can have multiple roles
	    • Registration Authority
	    • Certificate Authority
	    • Certificate "Factory" technical operation of issuing management and revocation
	
	2. **Electronic Post Mark**
	  • Provision of EPM certificate to verify email
	  • In effect TTP Services of time stamping etc
	  • Web Site validation

IPC Member Posts Current E-Identity Service Status

Posts have historically entered and exited this market Core challenge is that some posts while not offering an independent certificate are in effect proving a certificated electronic identity which is integral to e-box service with process compliant to qualified certificate status.

Post	CA	Face to face registration for eBox	Comment
An Post		Exploring related to digital mail	
Australia Post			
Canada Post		Exploring related to digital mail	
Correos y Telegrafos			
CTT Correios de Portugal			• De-facto certificate with e-box
Cyprus Post			
bpost	[red]		
Deutsche Post DHL			• Exited CA IN 1990s • De-facto certificate with e-box
Hellenic Post ELTA			
Iceland Post			
Itella			• Exited CA • Acceptance of other certificates
Groupe La Poste			

Post	CA	Face to face registration for eBox	Comment
Magyar Posta			
New Zealand Post		Exploring related to digital mail	
Norway Post	[red]		
Österreichische Post			
Poste Italiane	[red]		• CA and embedded eID
P & T Luxembourg	[red]		• Shareholder in Luxtrust – CA
Posten Norden			• Exited CA in 1990s • Acceptance of other certificates
Royal Mail Group		Exploring related to digital mail	• Exited CA business in 1990s
Swiss Post	[red]		
TNT		Exploring related to digital mail	• Exited Service • Exploring
USPS			

IPC Potential Roles: Certification Services

In the certificate services market, if the systems used are to have international validity, there will need to be a system of international acceptance between authorities

Role	Core Service
Electronic Operator	1. Offers through national post, a full range of CA services to multinational companies who would be their own local trust company, supported by national posts integrated through IPC 2. Run back office CA service in terms of production/issuing and registration for smaller members who would front the operation nationally 3. Run back office CA service in terms of production/issuing and registration for smaller members who would front the operation nationally 4. Provision of CA services between the Posts to e-commerce. IPC issues inter-post certificates
Electronic Facilitator	1. Validation of postal certificates issued by respective posts on behalf of trading businesses, and authentication of post CA standing 2. Quality assurance of international post CA service by ensuring consistency through best practice standards and facilitating both acceptance & technical interoperability. Implemented through jointly agreed standards and auditing of performance
Electronic Catalyst	1. Benchmarking of existing services to help operators impact standards 2. IPC would extend the current information services to a formal dedicated project working on the role of posts as a certification authority. The role would initially be in benchmarking to define and disseminate best practice. Key topic areas would include: • Certification technology • Certification process and operations • Certification applications • Marketing and implementation support
No Role	

Implementer

Audit

Advisory

Awareness

IPC Potential Roles: Certification Services

In a previous project (2002) the Board expressed an interest for IPC to develop cross certification services. This may now be more relevant as many of the eBox services rest on either real or defacto soft certificates and Trusted Third Party authentication processes

Business Idea	Demand	Why IPC?	Value to Member
7. Multi-national Company	• Multi-national companies will need function - some will outsource	• Complementary service to members	• Attract companies to global trust brand of Posts
6. Back Office Outsourcing	• Reduction of start cost	• Extension of IPC role	• Enables smaller Posts to work in area
5. Inter-Post CA Service	• Intra-company CA becoming essential • B2B Post e-business security	• Require trusted neutral intermediary	• Guarantee e-business exchange • Enhance intra-Post efficiency
4. Validation Service	• Increase user confidence in cross-border trade	• Neutrality	• Enhance national service because of certification
3. Best Practice Standards	• Cross-border CA essential • Post investing • Global Postal CA brand	• Extension of quality/ standards role	• Quality assurance is first level of interoperability
2. Benchmarking	• Quality, knowledge & confidence	• Neutral role	• Diagnostic tool to raise efficiency & quality
1. Annual Report	• Posts need independent update	• Vendor/ Service neutral	• Increase & standardise knowledge

IPC: Inter-operability Issues

There are a number of major issues to be understood and resolved in international inter-operability of certificates:

International **Post** Corporation

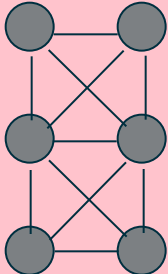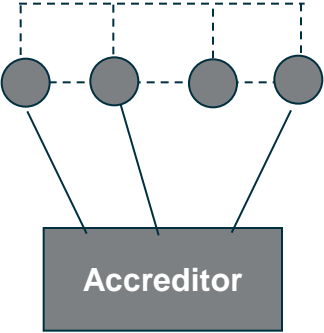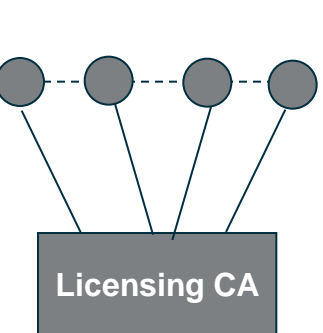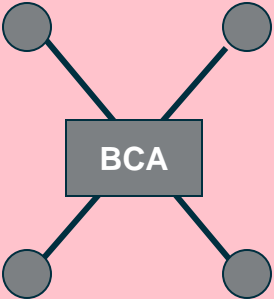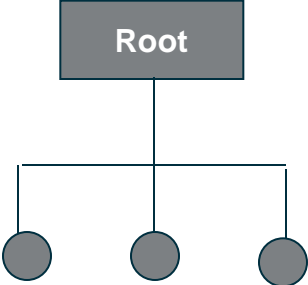|	
Directory Issues	• Developing inter-operability between directory services and between individual postal CAs
Certificates and Certificate Policy	• Ensuring that there is a common set of rules that indicates the applicability of a certificate to a particular community and/or class of applications with common security requirements • Instrumental in forming the basis of inter-operability between two or more PKI domains
Levels 1-3 Consistent Definition	• Ensuring that a common set of rules and definitions exist
Naming Conventions	• Need to agree a set of conventions to cover naming issues that may arise in cross-certification
Boundary and Range Issues	• Ensuring that one CA can recognise certificate serial numbers, names and paths of certificates issued by another CA
Failure Procedures	• Development of a standard set of procedures that are initiated in a case of compromise to the system
Authentication	• Authentication is the process by which the electronic identity of a client is asserted to, and validated by, an information system for a specific occasion using a credential issued following a registration process. • Need to ensure that common processes are adhered to by postal CAs
Registration	• Registration is the process by which a client gains a credential such as a digital certificate for subsequent authentication. Registration can be associated with a real-world identity or can be anonymous or pseudonymous. • Need to ensure that common processes are adhered to by postal CAs
Physical Issuing	• Set of procedures to ensure that the certificate is not compromised at any stage between production and distribution to the end-user
Revocation	• A CA maintains a list of certificates that have been withdrawn prior to their normal expiry date (certificate revocation list). Certificates presented by a relying party are checked against this list to ensure that they are valid. • Need to ensure that common rules around certificate revocation are in place

Certification Services: Key Considerations

Should there be demand for inter-operability between posts, key issues to be considered are described below:

International **Post** Corporation

Facilitator

Key Features

- Agreed acceptable certification policy

- Postal CA policy standards

- Certification and authentication processes technology standards acceptable minimums

- Certification policy and processes auditing

- Legal compliance domestic /international

- International certificate interoperability

Member Benefits

- Meets Postal need for international inter-operability requirement at lower cost than bilateral agreements

- Establish international Postal standard

- Create competitiveness in international certificates

- Create international competitive parity with other CA providers

Facilitator

Participation Principles

- Agreement on Certification Policy & Auditing Procedures
- Following common standards, agreeing on when to move from bilateral to bridge interoperability (cost & benefit analysis)
- Bridge CA charge mechanism
- Involvement of non-Postal partners

Service Delivery

- Coordinate agreed standards on certification procedures

- Audit standards on certification procedures

- Manage some form of Bridge CA role and Validation process

- Coordination for members of multinational companies' CA requirements

Technology

- Dependent on solution

- Solution in Bridge CA & technical interoperability requirement to use international open PKI standards

IPC Potential Inter-Operability Models For Certificate Services

There are a number of theoretical models and the most likely two for IPC would be mutual cross certification or a bridge CA Function

Mutual Cross-Certification	Accreditation Scheme	Cross Recognition	Bridge CA	Joint CA

• IPC creates the standards and procedures which would expedite bi-lateral cross certification
• Key areas
  – Name constraints
  – Policy constraints
  – Path length constraints
	• Postal CA is accredited by IPC
	• All accredited CAs have public key signed by IPC
	• Inter-operability based on CAs trust of accreditor
	• Accreditation based on agreed minimum standards
		• Postal CA is licensed and audited by IPC under mutually recognised criteria
		• Licence confirms agreed operating procedures
		• Member and IPC create criteria and audit
			• Cross-certification scale diseconomies
			• IPC act as bridge CA
			• Introduce one organisation to another
			• CA cross-certified through the bridge CA
				• Strict hierarchy
				• Postal root CA
				• Potential outsource opportunities
				• Ensures inter-operability
				• Outside IPC brief

CA Services: Current Postal Market Positioning

Posts are taking a number of positions in this re-emerging market.

Full CA	• Provide full commercial identity service which includes personal certificates, qualified certificates and a range of business-based security applications for internal networks and e-commerce. A strong relationship to e-Government services is normally central to this position. • Compete with a wide range of international private sector companies and a number of domestic operations often linked to banks. Market opportunity tends to be very country specific. Revenues directly related to selling services. • bpost, Norway Post, Swiss Post
Embedded e-ID	• Provide individual consumers/citizen electronic authentication as an integral part of digital mail box solutions. Services are based on high degree of face-to-face authentication, creating the platform for offering wider services particularly identification for e-government applications. • Competes with existing messaging solutions. Revenues are not derived from the authentication process but from mail and other related services. • Deutsche Post DHL, Poste Italiane SpA
Registrar	• Posts simply act as the Registration Authority using retail networks to undertake the face-to-face authentication of individuals on behalf of the Certificate Authority. • Revenues are simply transaction fees. • Evaluated by TNT
CA Based Service	• Posts provide services based on authentication but do not undertake the authentication themselves. This model is prevalent in Scandinavia and has been used in Canada where banking identities have come to dominate the personal electronic identification space and are being used for wider applications. • No direct revenues from authentication but from certificate-enabled applications • Itella, Posten AB, Canada Post

Mutual Cross-Certification: Description

Description	• IPC would with its members establish minimum agreed procedures at given levels of mutual acceptance or recognition which would expedite bi-lateral cross-certification • Individual postal CA wanting cross-certification would develop their CPs in accordance with the commonly agreed procedures, ensuring interoperability and ease of integration • In forging an agreement, postal CAs would either appoint an independent assessor or perform an in-house audit to ensure that CP requirements have been met
Features	• IPC would be the coordinator of a procedure-setting body for postal CA services • May appoint an independent assessor to carry out audits for postal CAs entering cross-certification agreements • Rules and standards encompass/meet requirements of EU Directive or other de facto standards • IPC would not operate an accreditation scheme
Benefits	• Postal CAs have a set of guidelines and structures that outline the requirement for inter-postal cross-certification • Overcomes problems associated with differently structured CPs in the cross-certification process • Speeds up cross-certification process • Strengthens position of individual posts as cross-border Trusted Third Party
Issues	• Many postal CAs have already developed their own CPs- issues around integration • Issues around national interpretation of EU Directive & EESSI standards

Bridge Certificate Authority: Overview

Description	• IPC would act as a hub for a network of postal CAs, replacing the disorganised mesh of a set of bilateral agreements, either developed independently or within a mutual cross-certification forum • IPC Bridge CA acts as a facilitator or introducer of one CA to another making it unnecessary for each CA to enter into a bilateral cross-certification arrangement with every other CA
Process	• BCA maps each individual CA's policies to its own set of policies to ensure compliance • BCA only exchanges a pair of cross-certificates with each CA- does not issue certificates to end-users • BCA develops requirements for different levels of assurance to prevent low-assurance certificates from contaminating high-assurance domains • BCA maintains directories and CRLs
Benefits	• Creates trust path so that levels of assurance honoured by different PKIs can be reconciled • Facilitates dissemination of standards among vendors • Shares cost and creates economies of scale for each member post • Allows consolidation of cross-certificates that reduces labour costs associated with their management (e.g. negotiating individual bilateral agreements) • Reduces complexity of entire cross-certification process • Enables introduction of new CA into trust network with just one relation
Issues	• How to determine equivalence between CAs with differently structured CPs • Product vendor interoperability • Border directories

IPC Roles and Services Summary

The matrix provides a high level summary of potential roles and services. Italicised roles are the ones which were most often cited in member discussions

Position	E-BOX	Secure Electronic Identity
Electronic Operator	• IPC provide a network service which would ensure that message are routed securely between postal systems.	• Offers through national post a full range of CA services to multinational companies who would be their own local trust company, supported by national posts integrated through IPC
	• IPC would monitor message performance & integrate with CA services	• *Provide infrastructure to create interoperablity*
Electronic Facilitator	• *IPC to develop acceptable minimum interoperability standards and commercial agreements to support international infrastructures whilst maintaining the integrity of domestic value propositions*	• Validation of postal certificates issued by respective posts on behalf of trading businesses, and authentication of post CA standing
	• *IPC develop strong competence in legal/ regulatory issues to provide both an information and lobbying function for members in the digital service area*	• *Quality assurance of international post CA service by ensuring consistency through best practice standards and facilitating both acceptance & technical interoperability. Implemented through jointly agreed standards and auditing of performance*
Electronic Catalyst	• Survey and analysis report of software systems, functionalities & services	• Benchmarking of existing services
	• *Provide information service to spread best practice on commercial and adoption strategies*	• *Provide information service to spread best practice on commercial and adoption strategies*