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NP Regulatory Overview

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Providenciales, Turks & Caicos
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TELECOMMUNICATIONS COMMISSION

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Agenda

- Role of the Regulator
- Regulatory Framework for NP
- Regulatory Enablers for NP
- Porting Process Development
- Central Clearing House Vendor Selection Process
- Business Rules Development
- Consumer & Inter-operator Codes & Contracts
- Porting & Transit Charging Approaches
- Data Protection & LEA considerations
- Cross-stakeholder implementation management
- Post Launch Regulatory Considerations
- NP Communication and Education
- Ensuring appropriate NP Behaviours and Performance

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What is Number Portability?

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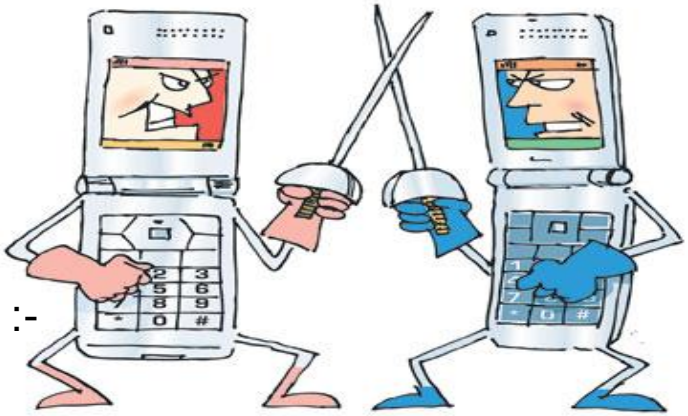
"A process enabling telephone users to retain their telephone numbers when changing from one network operator to another"

- **NP is merely an enabler for competition**. NP removes final barriers of customer choice and flexibility
- Competition is driven by other factors, including :-
  - Nature of competitor activity to offer attractive products and choice;
  - Number of competitors;
  - Level of regulation in a market;
  - Cost of porting;
  - Porting timeframes; and
  - Complexity of porting
- Successful NP implementations characterised by :-
  - Active involvement of all parties;
  - Planning and Readiness;
  - Simple transparent processes;
  - Low price (Free?);
  - Competitive offers; and
  - NP promotion & education



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Role of the Regulator

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Regulator Involvement

- Regulator sets the framework for efficient and successful porting
  - Simple, Quick, Cheap, Reliable
  - Set clear rules for fair competition
- Regulator pulls the operators together to
  - Overcome Technical, Process, Commercial issues
  - Provide leadership for implementation & direction
- Champions Consumers
  - Drives public awareness and education of NP
  - Develop aligned and effective communication messages

ESSENTIAL:
Regulator and all operators must work closely fully for NP to succeed

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Implementing NP – Role of the Regulator?

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What are the possible roles Regulators can adopt ?

- **Leader – Actively Directing ?**
- **Passive Participant?**
- **Observer?**

Responsibility to safeguard consumers and ensure NP supports development of competition – Regulators are the KEY stakeholders in delivering NP

NP process & business rules align with best practices & is appropriate for the local environment

NP is delivered in a timely yet effective and appropriate manner – assessing & monitoring stakeholder readiness

Take account of differing interests and tactics of the various stakeholders

Benchmark against other similar jurisdictions and take advice from experts

NP is only implemented once – critical to get IT right first time

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Role of The Regulator – Food For Thought?

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Stakeholders have very different interests in NP

- **Supporting**
- **Do Not Understand**
- **Constraining/ Delaying**

NP is complex and has numerous levers which can radically impact consumer demand

Very few NP programmes are delivered on time – Realism is key in setting & maintaining public and industry expectations

Leaving NP to operators is likely to result in delays, more delays and sub-optimal NP delivery – Successful NP programmes are driven by Regulators

Regulators should set clear & detailed NP requirements, engagement frameworks and milestones – monitor, probe and drive!

Implementing takes time – Never RUSH it – only launch when all parties are ready

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Regulatory Framework for NP

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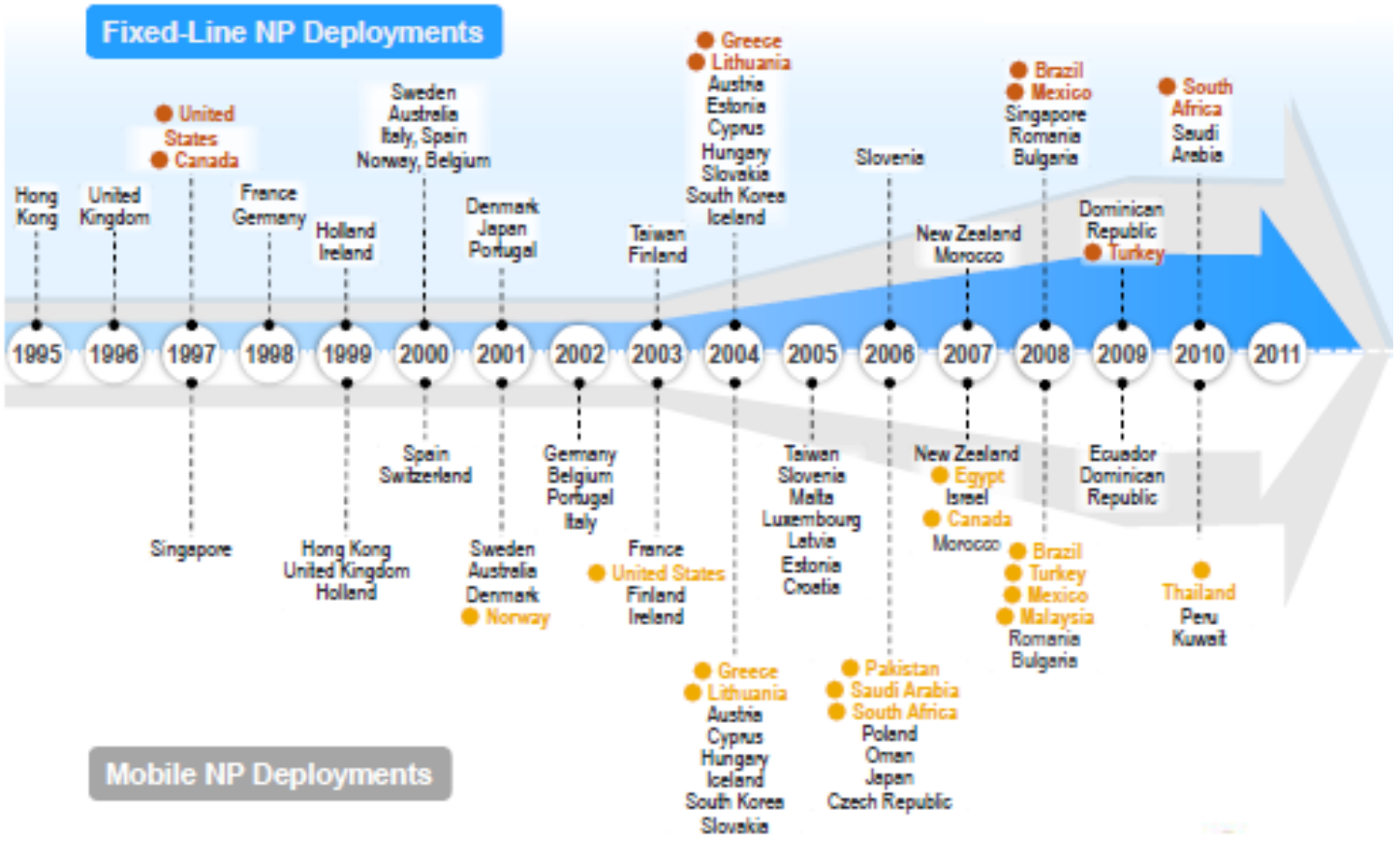
NP – a Global Phenomenon

- ***51% World has Number Portability***



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Drivers for introducing NP

- Catalyse further competition
- Reduce market pricing
- Increase consumer choice
- Improve customer and network service and quality
- Drive innovation
- Drive efficiency
- Encourage new entrants

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NP – Key Pre-Requisites

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- Stable numbering plan
- Viable competition
- Equal access to fixed and mobile products across the population
- Effective and appropriate wholesale access product framework
- Robust interconnection between operators
- Clearly defined NP requirements from the Regulator
- Appropriate commercial NP model

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Factors Impacting NP Demand

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- Market readiness for Number Portability
- Degree of consumer choice – Degree of competition
- Porting charges
- Porting timeframes
- Access to porting facilities
- Ease of porting – simple & robust porting processes
- Alternative & equivalent service provision

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NP – Legislative/ Regulatory Considerations

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Does existing Telecoms legislation & licencing allow or support the introduction of NP? – SIM registration/ Data Protection?

Do existing licencing frameworks compel operators to work the porting vendor and each other to implement NP?

Does the Telecoms legislation provide effective tools to discourage inappropriate behaviours and non-compliance?

- **Effective Punitive/ Financial measures vs "Nuclear" deterrent?**

Are additional legislative instruments required to establish key LNP principles?

Could implementing NP open-up third party objections or legal action?

How to determine and manage operational SLAs and Penalties with legislative/ regulatory framework?

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Key elements of the NP regulatory framework

- Telecoms Legislative Mandate
  - Sanctionable Offences
- Operator Licence Obligations
- Central NP provider licencing/ contract approach
- Inter-stakeholder NP contract framework
- Ancillary legislative/ commercial requirements
  - ESCROW
  - 3rd Party Access
  - Data Protection compliance
- NP Functional Requirements
- NP Business Rules
- NP Consumer Code & Guidelines
- NP Implementation Programme
- Post NP launch – Operational Management Framework

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Regulatory Enablers for NP

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Number Portability Strategic & Tactical Levers

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- Manual vs Automated porting approach?
  - Manual – low set-up cost, high transaction costs, reduces porting flexibility and demand, increases porting timeframe – Deters porting
  - Automated – high initial investment, low transaction costs, fast porting times, reliable, flexible to deal with varying demand – Encourages porting
- Launch Date? Tactical impact of NP launch?
  - Balancing Operational Readiness with Tactical/ Marketing Advantage
  - Excuses!
    - Resource constraints
    - Vendor delivery constraints/ delays
    - Conflicting regulatory/ corporate priorities
- Porting Charging – consumer charges directly influence porting demand
  - Who Pays? Customer or Donor?
  - How much? Bench mark against other countries vs cost based?
  - NP Clearing House fees
    - Subscription or transaction based
  - Inter-Operator Porting Fees (Donor charges Recipient) – what is allowed?
  - Set-Up Recovery
    - Automated - High Investment vs Operational Efficiency
    - Manual – Low Investment vs High Operational Costs & Resources

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Number Portability Strategic & Tactical Levers

- Porting Timeframe? – minutes vs days – Porting demand related to porting timeframe
  - Single vs two stage
  - On demand vs Batch porting
  - Daily/ Weekly Quotas – essential to safeguard porting SLA where manual porting is used – effective tactic to reduce porting capacity and demand
- Availability of Porting?– Retail/ Dealer/ Web/ Call Centre
- Alignment to SIM registration?
- Consumer Validation Approach? – Complexity influences porting demand and efficiency
  - Validation/ ID requirements
  - Porting Data Transfer between Recipient & Donor
  - Data Protection issues
  - Porting Hours/ Days
  - Reject Reasons – More complex NP process result in more opportunities for port rejections and constrain porting demand

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Number Portability Strategic & Tactical Levers

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- Treatment of Debt? Should porting be an extension of credit control?
- Winback? Allowed or not?
- Onward Porting restriction ?– How soon can customers be allowed to port again?
- Transit Charging?– Effective tactic to generate extra wholesale revenues through NP?
- NP Code of Conduct? – Influencing inter-operator NP working & consumer expectations for NP
- NP contract ?- Inter-operator & NP Clearing House contractual approach
  - Licencing or commercial framework? – involvement of regulator?
  - Operator contracts – single or multiple?
- Security/ LEA requirements? Constrain or support NP process?
- Third party access to NP system & data? VAS providers, SMS hubs, international parties

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Porting Process Development

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NP – What the Customer Wants?

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Background - Good Practice Guidelines

- Donor v's **Recipient** led
- **Centralised Number Clearing House**
- Routing
  - Indirect
  - **Direct**
    - **All Call Query (ACQ)**
    - Query on Release
- Porting Administration Approach
  - Manual
  - **Automated – Real Time**
    - **Completed within 24 hours**
  - **Minimal rejections and failure rates**
  - **Limited rejection reasons**

- **Cheap or preferably FREE to the consumer**
- **Debt is not a reason to block porting**
- **Winback prohibited**
- **Cancellation is NOT allowed when in progress**
- **Real-time porting not deferred**
- Implementation order
  - Mobile to Mobile
  - Fixed to Fixed
  - Mobile to Fixed or Fixed to Mobile

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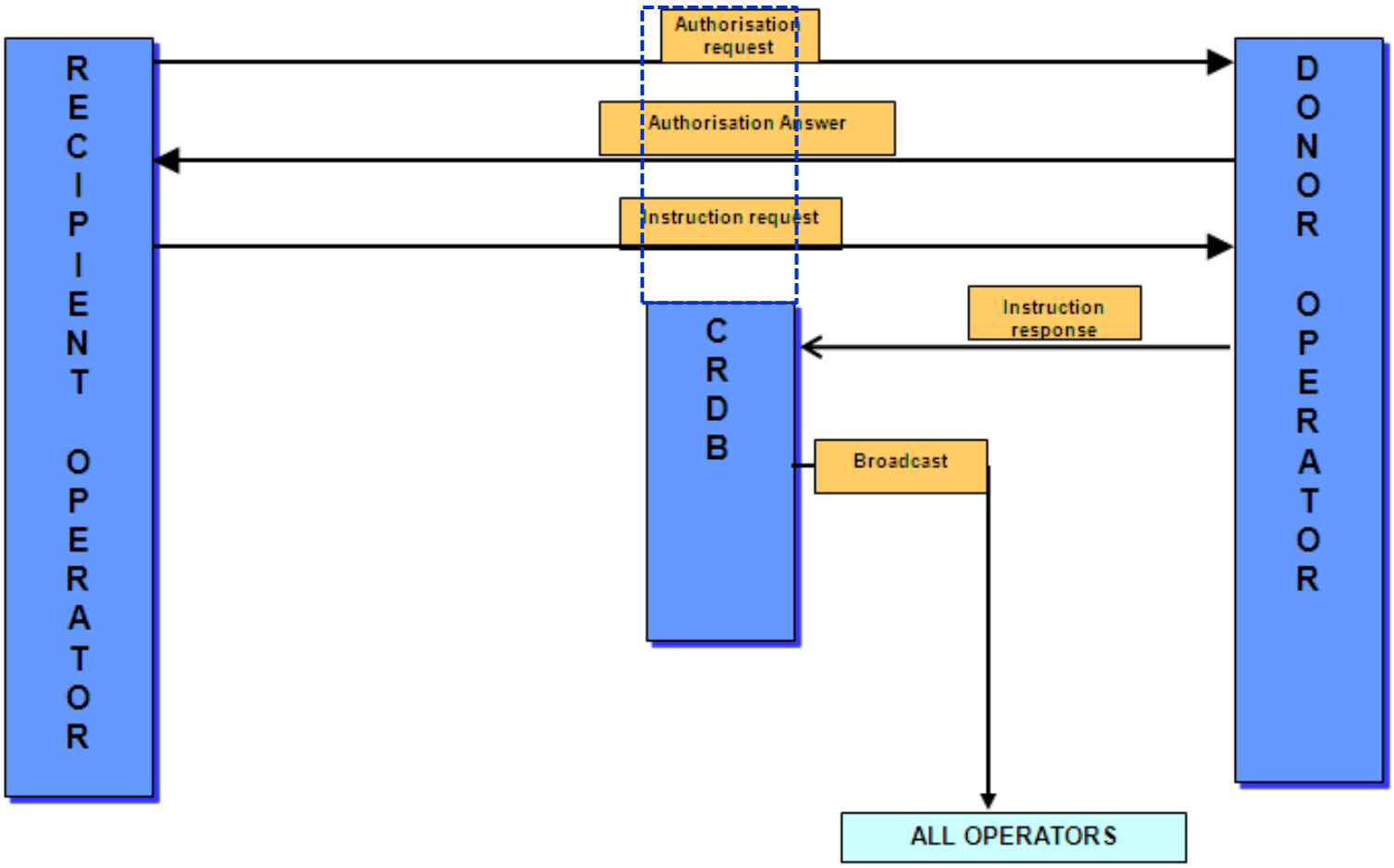
Porting Process - Overview



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Number Portability- Centralised Porting Process

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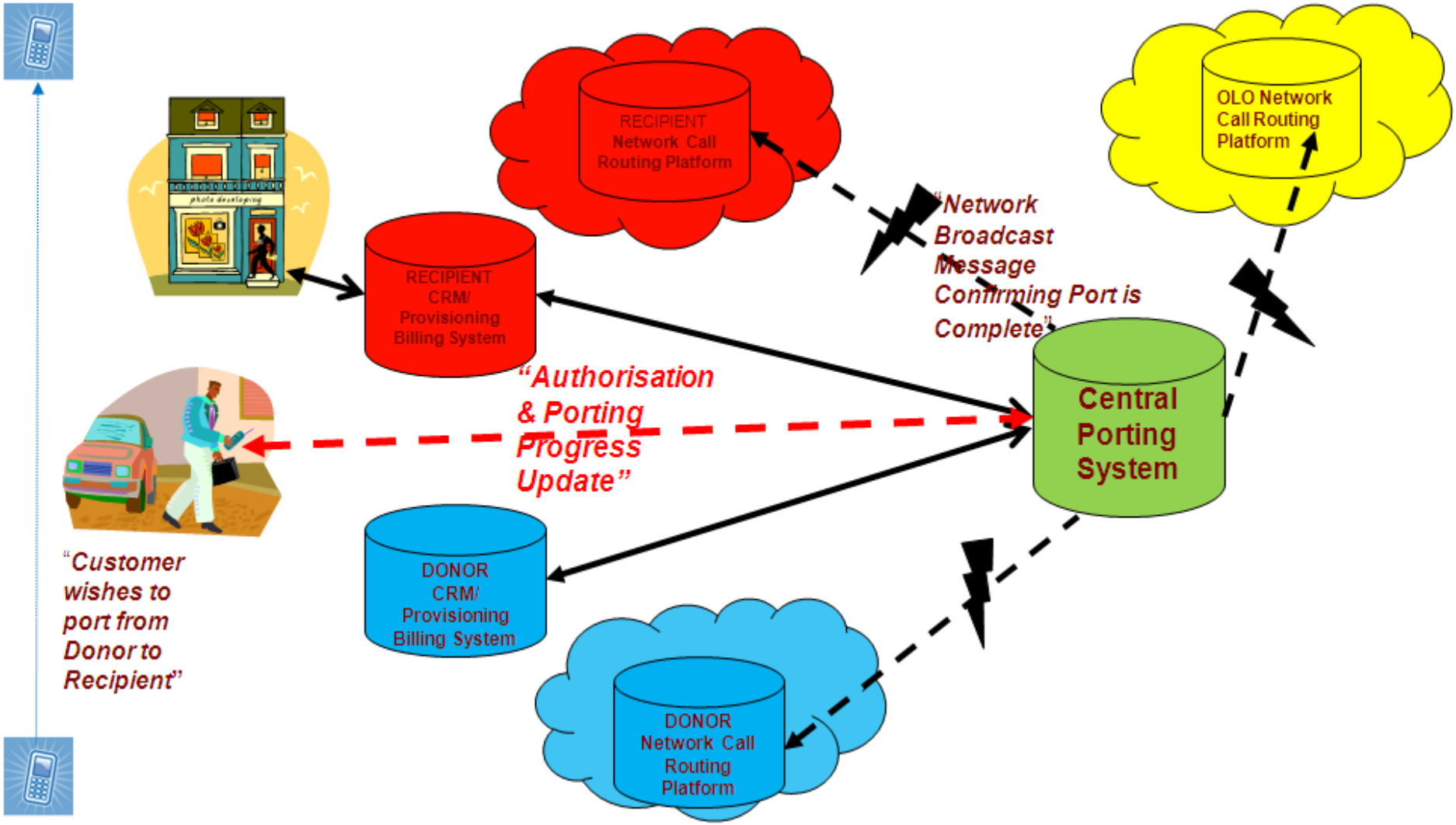

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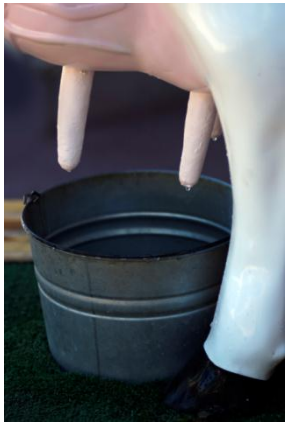
NP Efficiency vs Functionality

- Balancing Efficiency/ Consistency/ Security & Flexibility?
  - NP Process steps
  - Reasons to Reject
  - Treatment of Debt
  - Customer Validation
  - Cancellation – Point of No Return
  - Winback
  - Cooling Off
  - Onward Porting
  - Block Porting
  - Deferred Porting
  - Return to Block Operator
  - Quota Management
  - Telephone Directories



" Throw in a few bells and whistles and this baby will ***sell***. "

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NP – Fixed vs Mobile ?

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- **Service availability between Operators - Key Pre-requisites**
  - Direct Interconnection – Fixed to Fixed & Fixed to Mobile
  - Network Access – Fixed – LLU etc – need for pre-order audit etc
- **Operational delivery**
  - Mobile – transfer/ provisioning completed at core network level – simple & quick
  - Fixed – transfer can be complex, involving audit, exchange jumpering, Wholesale Access Product Framework (LLU/ WLR etc) customer premises line provisioning & engineer co-ordination
- **Porting Timescales**
  - Mobile – less than 2 working hours
  - Fixed – typically 2 to 5 working days (aligned to existing provisioning timeframes)
- **Porting Windows**
  - Mobile – aligned to retail opening hours
  - Fixed – extended since business customers require out of hours porting to minimise disruption to business activities

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NP – Fixed vs Mobile – Key Differences?

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- **Due Diligence versus Porting Efficiency – Porting can open opportunities for fraud**
  - Validation
    - Proof of ownership/ ID verification – local forms of acceptable ID – corporate/ block porting?
    - Customer authorisation
      - SMS (Mobile)
      - IVR or CdB generated PIN(Fixed)
- **Local regulatory/ market requirements :-**
  - Treatment of ported services within integrated single customer billing? Winback protection/ Data Protection?
  - Debt impact – porting of individual services from a bundled/ integrated account?
  - Local Directories ?
  - Separate porting of DSL and Voice services – re-provisioning new line for retained DSL services
  - Transit charging of incoming international traffic
  - Local no prefix dialling – Routing changes?
  - Differential billing/ ring tones?
  - Reservation of number blocks for future expansion?

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Central Clearing House Vendor Selection Process

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NP Vendor Selection Process

- Vendor Selection Process – Government procurement rules?
  - Phased approach
  - Identifying & approaching potential vendors
  - Vendor selection criteria and evaluation framework
  - Stakeholder/ Operator involvement
- Contracting approach
  - Licence or Contract?
  - Contracting parties? Regulator/ operators?
  - Licence duration
- Comprehensive tender documentation
  - NP functional & process requirements
  - Technical requirements for central NP platform
  - Security/ data protection specifications
  - Operational service delivery requirements
  - Performance/ SLA requirements & penalties
  - Commercial terms – qualification requirements, commercial model/ pricing approach/ ESCROW
- NP Central NP platform Vendor Selection takes at least 6 months
  - Development of Tender Documentation – 2-3 months
  - Issuing tender notifications and awaiting vendor submissions – 2 months
  - Assessing vendor selections & determining short-list – 1 month
  - Detailed assessment of short-listed vendors – 1 month
  - Licencing/ Contract negotiation – 1-2 months

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NP Central Porting Platform Vendor Selection

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Central Number Platform

- NP service handling – Fixed/ Mobile/ Hybrid/ VoIP/ enum etc
- System Flexibility/ Configurability
  - Process steps
  - Timers
  - Reject reasons etc
  - System/ validation checks
- Processing capacity & speed
- Customer validation/ communication mechanisms
- Interfacing/ access options
- GUI – Quality/ Ease of Use
- Ancillary functions
- Locally located vs Hosted (Offshore)?
- System Security & Redundancy
- Data management/ protection
- System availability/ reliability
- Reporting capabilities

Vendor Characteristics

- References/ Track record – Similar NP markets
- Understanding of Bahamas market & requirements
- Location & Resources
- Partner/ Consortium arrangements
  - Nature of consortium – roles etc
  - Capabilities of local partner
- Support/ Help Desk facilities
- Keenness/ Willingness
  - Contract/ Licencing approach
  - Technical support
  - Implementation support
  - Post launch engagement
  - Risk approach
- Commercial model
- Costs
  - Set-up
  - Service Charges
  - Transaction Charges

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Contracting/ Licencing Models

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Option A	Porting Service Provider contracts with operators individually – under framework agreement
Option B	Porting Service Provider licenced by Regulator to provide NPC service & charges Operators for usage etc
Option C	Porting Service Provider contracts with JV formed by Operators
Option D	Porting Service Provider contracts with Regulator & Regulator recovers costs from Operators

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NP Vendor Charging Models

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Porting Transaction Based – Low risk to Operators/ High risk to Porting Vendor

- Per Port Basis – Initiated vs Successful?
- Minimum volume commitments?
- Discounted based on volume breaks?
- Ancillary charges – SMS/ messages etc
- Purely transaction based or combined with monthly fixed service charges?

Monthly Service Charge – Lower Risk to Porting Vendor

- Fixed monthly fee irrespective of porting volumes/ demands
- How to allocate across operators?
  - Equally?
  - Based on demand generation? Increases complexity and processing of cost allocations

Universal Porting "Tax" – Apply cost of porting service across the whole market

- Charging based on number of active subscribers or number blocks issued to operators
- Subscriber based - Can spread the cost of NP across the entire market – penalises consumers who do not port
- Number Ranges allocated – can significantly increase NP costs to the industry and force return of unused numbers

Set-Up Charges – NPC Platform Cost Recovery – Reduces risk to Porting Vendor & Increases burden on the Operators

- Can be viewed as the Porting Vendor lacking commitment to NP
- Upfront NPC set-up charges can be negotiated to lower porting transaction charges
- Adds accounting complexity when new entrants join the NP party

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Business Rules Development

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Business Rules

- Working & living document – comprehensive yet clearly defining the porting specification, process & rules agreed by all parties, including :-
  - Overview of the porting process & functions
  - Defines terms used
  - Define porting timescales and porting hours/ days
  - Detailed description of each porting function and process stage
  - Responsibility of each party; ie, Donor, Recipient, Porting Platform operator
  - Commercial aspects – porting charging & cost recovery, transit charging etc
  - Document ownership and legal status
  - Change control process
- Defines operational procedures – including escalation of issues
- Service levels & remedies – to the customer & between the parties
- Problem solving & fixing
- Customer complaint handling processes
- Performance measurement, reporting and review
- Comprehensive, structured yet understandable… will be the bible used by the stakeholder operational teams after the programme teams have long gone!!

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Consumer & Inter-operator Codes & Contracts

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Consumer & Inter-Operator Codes & Contracts

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- Consumer Code – Clearly explains to customers the NP process, requirements & implications
- Porting Form – Power of Attorney & Customer Validation
- Inter-Operator Code
  - NP Business Rules
  - Contract framework – Optional – Outlining operator obligations & penalties to ensure NP is effective, consistent & positive
- NP Vendor/ Operator Contract Framework
  - Outlines obligations & requirements to interact with the Central NP porting platform
  - Aligns with NP Business Rules
- ESCROW Agreement – safeguards NP service should the NP vendor cease trading/ providing service
  - Provides access to NP Central Porting Platform Source Code
  - Safeguards Porting Data
- Third Party Access Contract Framework
  - LEA/ Security Service Access
  - VAS/ International Operators – read only access to support routing activities

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Consumer Code of Conduct

- Standard document agreed and used by all operators & provided to customers during the porting process
- Written to be readily understandable by customers – joint collaboration between operators' marketing teams
- Content consistent across all operators, but branded separately
- Explains
  - Porting Process – how it works & what the customer will experience
  - Customer obligations – ID/ authorisation, access to premises etc
  - Impact of Porting – payment of o/s charges, loss of features etc
  - Consumer rights and complaint process
- Approved by the local regulator

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NP Consumer Code.. In Action

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Hurray for Mobile Number Portability!

Getting Started

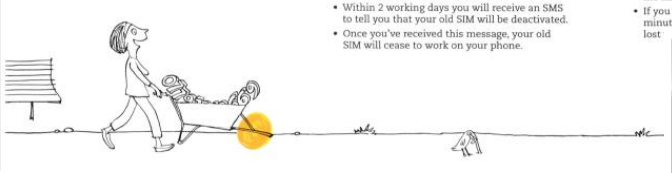
- Choose your new tariff package and optional new handset from our brilliant range.
- Tell our friendly staff you'd like to keep your mobile number. They'll ask you to complete a Porting Request Form.
- If you want a monthly contract package you'll need to provide the following:
  - Proof of ID (passport or driving licence)
  - A copy of your recent mobile bill and a utility bill (only for monthly contract customers)
  - Your existing working phone with the number you wish to keep.
- While you are still in store, we'll ask you to text the word PORT to 12345. Within a few moments, you'll get a text confirming your request to port.
- If you're getting a new phone, we'll hang on to it until the port is complete. For reasons beyond our control porting can't be done instantly. Depending on the time your porting request is submitted, it should take 2 days or less.

What happens next?

- Assuming the number you want to port isn't barred or suspended due to non-payment of bills, your request will be processed.
- Within 2 working days you will receive an SMS to tell you that your old SIM will be deactivated.
- Once you've received this message, your old SIM will cease to work on your phone.
- If you're keeping your old phone on Pay As You Go, simply replace your 'dead' SIM with the PAYG SIM we gave you.
- If you've decided on a new contract and a new handset, replace your 'dead' SIM with the new SIM we gave you. To pick up your new phone pop back to the Sure store to complete your contract.
- Our friendly staff will then help you with your phone settings (voicemail, WAP, picture messaging etc).

What else do you need to know?

- Your current provider may refuse to release your number if you have a large outstanding bill.
- Your existing settings (voicemail, WAP, picture messaging etc) will not be transferred when you port your number.
- Any messages, data or contacts saved on your existing SIM will need to be transferred to your new SIM.
- Moving does not relieve you of any contractual obligations with your existing service provider.
- You can move before your existing contract expires. However, you will still be liable for any charges on your old network and may be charged an early termination fee if you haven't completed the minimum term of your contract.
- If you have any credit or unused texts and minutes on your account this will also be lost



What "MNP" means for you?

What is "Mobile Number Portability" or "MNP"? Mobile Number
Portability (MNP) means you can keep your mobile phone number if you decide to change from one mobile operator to another. Basically, it's a process that allows you to keep your mobile number irrespective of who your network operator is. So, if you switch between operators, you don't have to go to the trouble of advising all your friends/family/colleagues that your number has changed – it stays the same.

When can I do it?
You will be able to use the MNP process from the 1st December 2008.

Who can use the system?
MNP is available to both "post-paid" (contract) and "pre-paid" mobile customers of all network operators in the Channel Islands, as long as their number hasn't been barred or suspended.

Customers will only be able to port their number to mobile operators in the same island as their current operator, so existing Sure Guernsey customers can port to Airtel-Vodafone Guernsey or Wave Telecom. They will not be able to port to Jersey mobile operators and vice versa.

Subject to minimum contract period obligations "Post-paid" customers will be able to switch unless they are barred or suspended due to non-payment of bills outstanding for more than 60 days.

"Post-paid" customers will receive a final bill for usage up to the time their number is switched to the new operator.

"Post-paid" customers that have not completed the minimum required term of the contract with their existing operator may be required to pay the outstanding balance of monthly rentals due under the contract.

Unfortunately, "pre-paid" customers won't be able to take outstanding credit with them, and should use it up before they switch.

How much will it cost me?
There are no charges for you to port your number. All porting charges are met by the network operator that you are switching to.

4. You will be asked to send a text from your phone with the word "PORT" to 12345. Shop staff will be able to help you to do this if required.
5. You will receive a text confirming that your request has been received.
6. Provided your number is not barred or suspended due to non-payment, your order will be processed and you will be informed of its progress by text.
7. Under normal circumstances your porting will be completed by the second working day after you complete your request (excluding weekends and bank holidays). At that time your number will have been moved to your new service provider and your existing SIM card will stop working. During busy periods the port may take longer to complete.
8. When this happens, put the new SIM card provided by your new service provider into the phone you wish to use. If you are unsure how to do this, you can go into the retail shop or authorised dealer of your new service provider and they will be able to help.
9. The process is complete.

Are there any other implications?

- Messages which have been sent to you, but not delivered, may be erased.
- You will lose your old voicemail, sms, mms and ancillary services, and you will need to set these up again with your new operator.
- Your friends and family may be charged differently when calling you after porting. Additional information on applicable rates may be obtained from your new service provider.
- You will be restricted from porting your number to a third operator or back to your original operator within 60 days of a previous port.
- If your new service provider fails to meet promised coverage or other such significant parameters, then you can reverse the porting within 14 days of your porting request.

Will I be bombarded with sales calls to stop me trying to switch?
No. Your old operator is not allowed to contact you during the porting process to try and persuade you to stay with them. In addition your old operator is prohibited from contacting you with the intention or effect of encouraging you to return to them for a period of 60 days following the completion of the porting process. However, the old operator can contact you to recover outstanding payments.

horised dealer of your chosen new service
mobile account, and tell them that you
obile number.

mplete an application form together with

e: -
a passport or driving licence;
d account, a copy of a recent mobile bill; and
the number you wish to keep.

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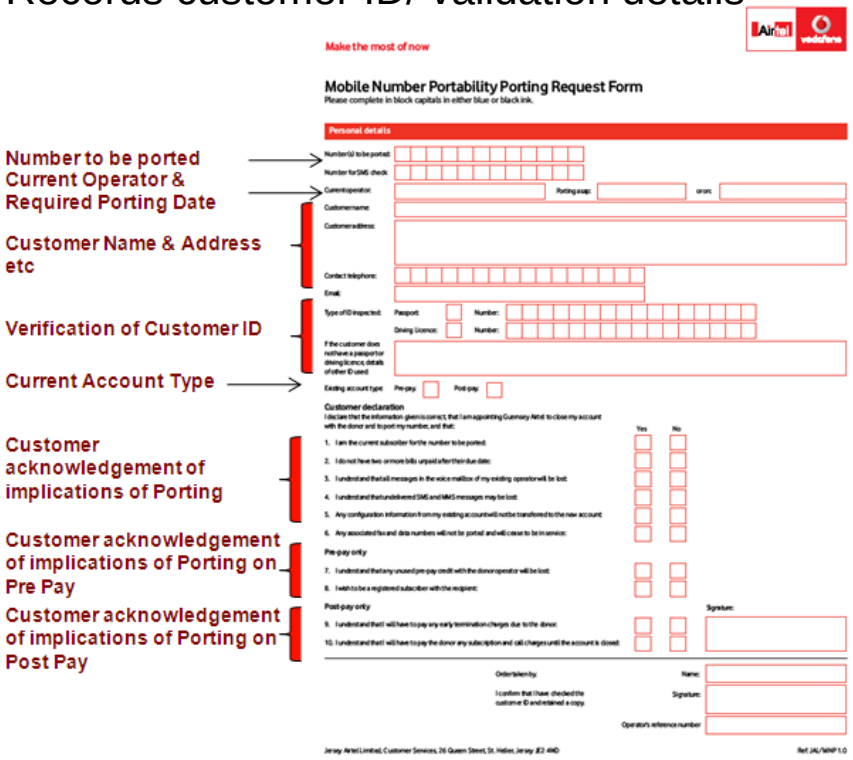
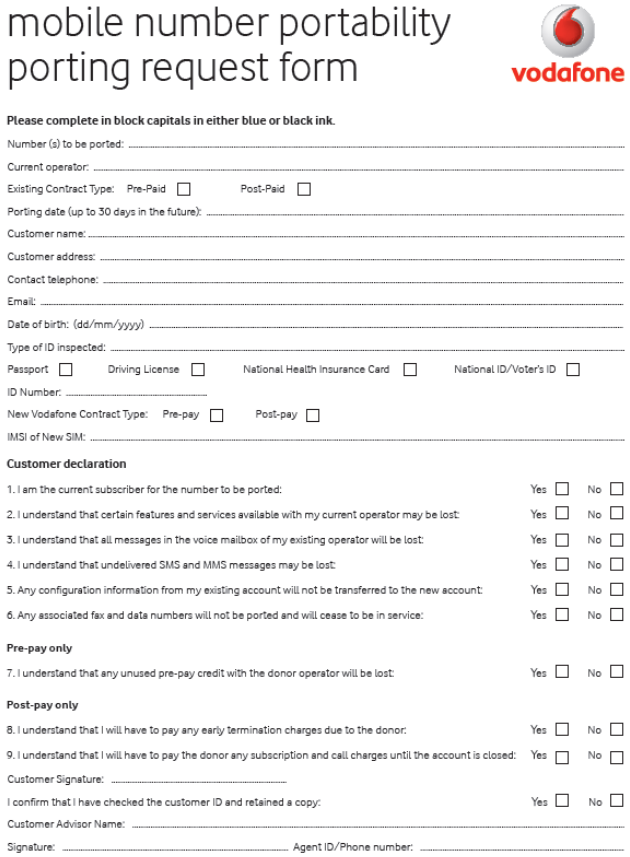
Standard Porting Form

- Standard format and content used by all parties
- Legal instrument (Limited Power of Attorney) – customer authorising the Recipient operator to close the customer's account with the Donor operator
- Signed Customer Declaration
- Outlines implications of porting
- Records customer ID/ validation details





mobile number portability porting request form

vodafone

Please complete in block capitals in either blue or black ink.

Number (s) to be ported: .....

Current operator: .....

Existing Contract Type: Pre-Paid ☐ Post-Paid ☐

Porting date (up to 30 days in the future): .....

Customer name: .....

Customer address: .....

Contact telephone: .....

Email: .....

Date of birth: (dd/mm/yyyy) .....

Type of ID inspected: .....

Passport ☐ Driving License ☐ National Health Insurance Card ☐ National ID/Voter's ID ☐

ID Number: .....

New Vodafone Contract Type: Pre-pay ☐ Post-pay ☐

IMSI of New SIM: .....

Customer declaration

1. I am the current subscriber for the number to be ported:	Yes ☐	No ☐
2. I understand that certain features and services available with my current operator may be lost:	Yes ☐	No ☐
3. I understand that all messages in the voice mailbox of my existing operator will be lost:	Yes ☐	No ☐
4. I understand that undelivered SMS and MMS messages may be lost:	Yes ☐	No ☐
5. Any configuration information from my existing account will not be transferred to the new account:	Yes ☐	No ☐
6. Any associated fax and data numbers will not be ported and will cease to be in service:	Yes ☐	No ☐

Pre-pay only

7. I understand that any unused pre-pay credit with the donor operator will be lost:	Yes ☐	No ☐

Post-pay only

8. I understand that I will have to pay any early termination charges due to the donor:	Yes ☐	No ☐
9. I understand that I will have to pay the donor any subscription and call charges until the account is closed:	Yes ☐	No ☐

Customer Signature: .....

I confirm that I have checked the customer ID and retained a copy: Yes ☐ No ☐

Customer Advisor Name: .....

Signature: ..... Agent ID/Phone number: .....

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Porting & Transit Charging Approaches

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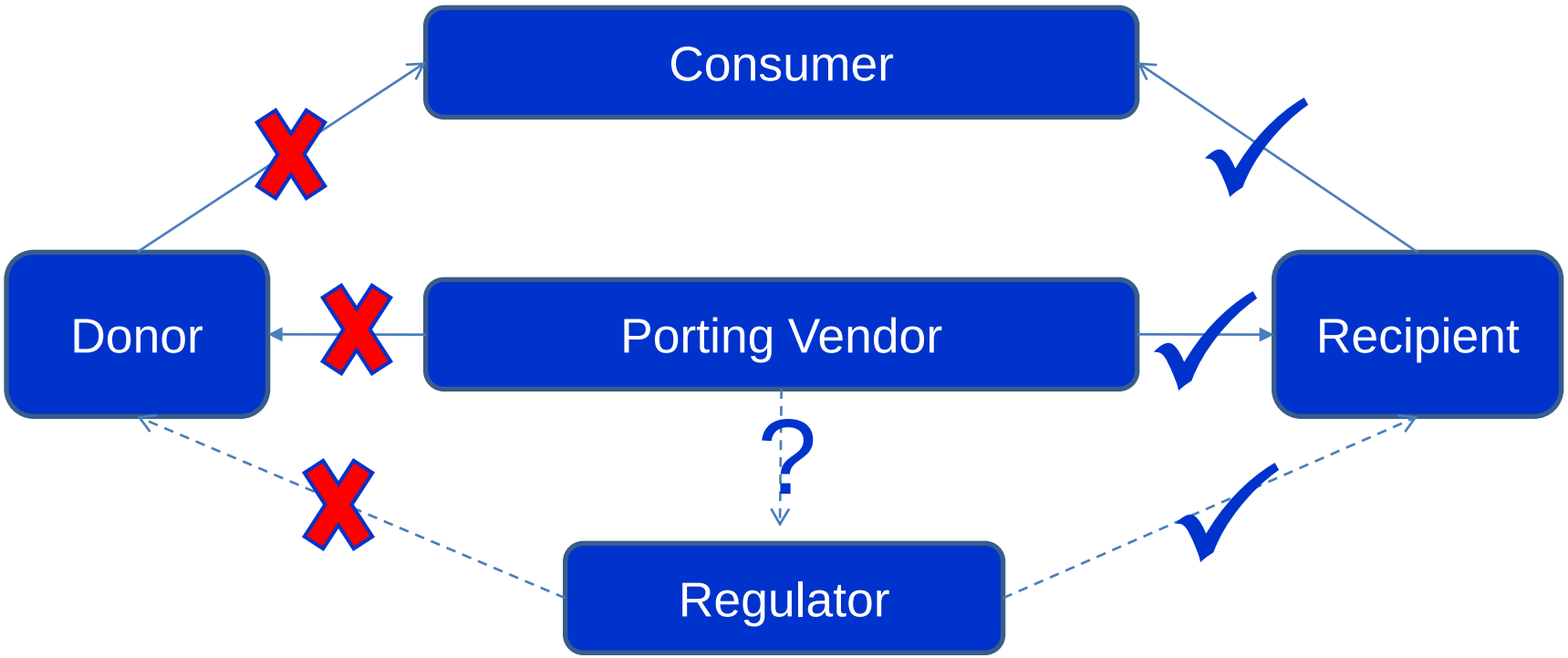
NP Charging Options



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NP Consumer Charging Approaches

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- Ghana – Optional – All Operators Offering For Free
- Kenya – Optional – Charges between $0 & $2
- Channel Islands – Optional – All Operators Offering For Free
- Isle of Man – Optional – All Operators Offering For Free

Country	Fixed	Mobile		Country	Fixed	Mobile
Belgium	10 €	N/A		Luxemburg	16 €	16 €
Czech Republic	40 €	N/A		Hungary	10 €	N/A
Denmark	10 €	10 €		Malta	N/A	15 €
Germany	N/A	22 €		Netherlands	N/A	N/A
Estonia	1 €	1 €		Austria	21 €	8 €
Greece	10 €	10 €		Poland	N/A	13 €
Spain	12 €	0 €		Portugal	15 €	11 €
France	10 €	12 €		Slovenia	10 €	10 €
Ireland	28 €	22 €		Slovakia	N/A	N/A
Italy	10 €	10 €		Finland	24 €	9 €
Cyprus	18 €	10 €		Sweden	12 €	2 €
Latvia	9 €	N/A		UK	N/A	0 €
Lithuania	0 €	0 €		*EU Communications & Regulation Commission report 12th Edition*		

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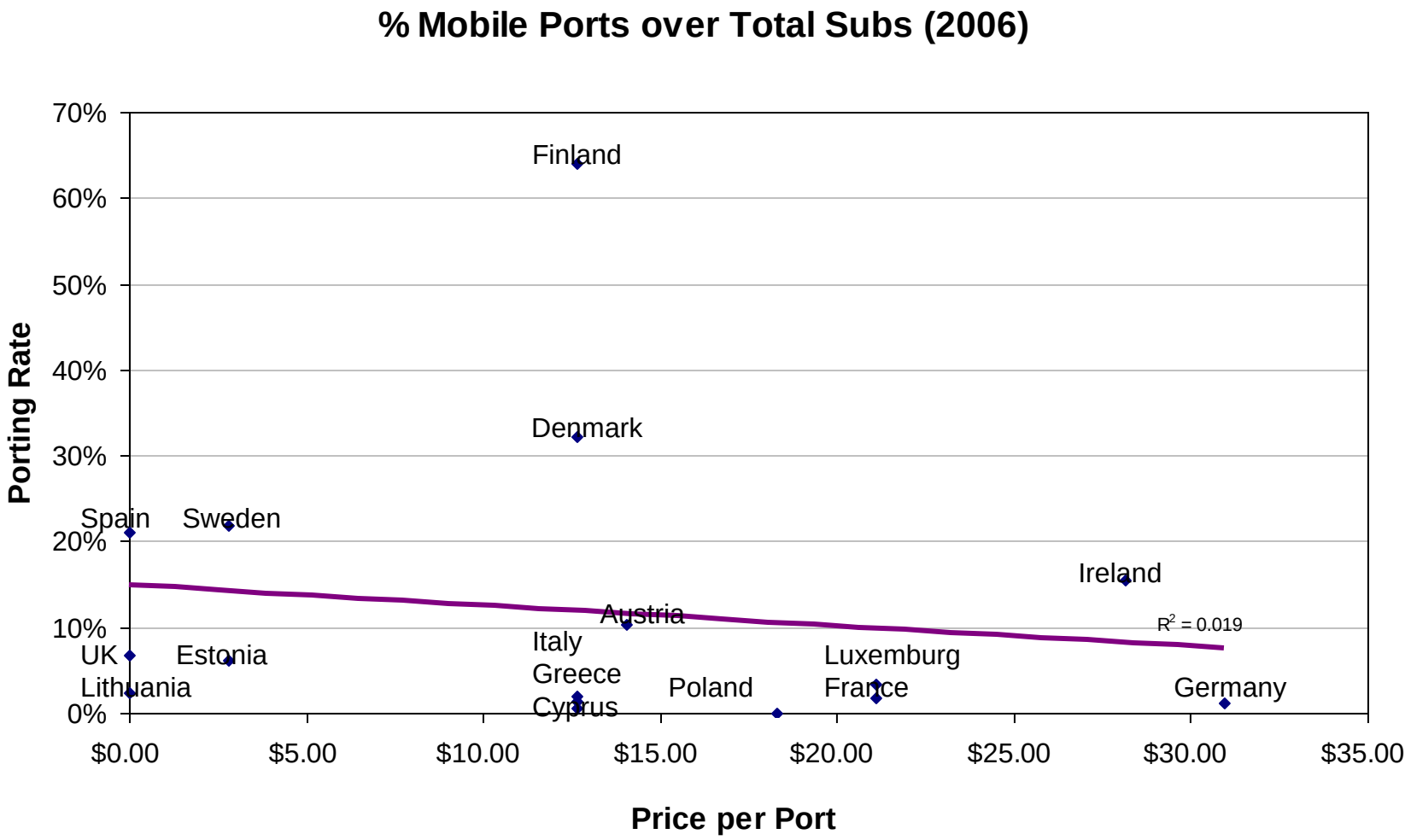
Impact of Consumer Charging on NP Demand



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Commercial Benefits of NP

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What are the drivers for implementing NP?

- **Stimulating further competition and value in the market?**
- **Opening up Consumer Choice & improving network service quality?**

Implementing NP is costly and rarely can be justified through conventional CBA (Cost Benefit Analysis)

- **Typical implementing NP costs between $1 & $10 million + PER OPERATOR**
- **Justifying NP should be focused around the qualitative competition and tangible consumer benefits**
- **Critically important to assess the suitability and readiness of the local market for NP**

Critical Role of Regulator is to set Porting charging to drive consumer demand for porting

- **Porting costs and charges are benchmarked and set against comparable markets and best practice**
- **Inter-Operator administration charges set at the lowest level to drive efficiency**
- **NPC porting charges set to enable NPC provider to make reasonable margins**
- **Mandate the NPC & operator cost recovery mechanisms and rules**

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NP Charging Approaches

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Consumer Porting Charging

- Directly impacts consumer porting rates
  - Nil charging encourages porting
  - Charging for porting reduces porting take-up – porting charges should be aligned to monthly ARPU

NPC Porting Charging

- Porting vendor commercial models vary – Critical to benchmark with other countries and optimise through effective tendering
- NPC related porting charges – Charged to Recipient not Donor

Inter-Operator Porting Administration Charging

- Appropriate the Donor Operators are allowed to recover reasonable porting administration costs from Recipient/ Beneficiary Operators
- Only incremental porting exclusive charges should be considered . Charges should be based on the most efficient operator – inefficiency should not be rewarded

Set-Up Charges – Typically not recoverable & the responsibility of each stakeholder

- Applies to Operators and Porting Vendor/ NPC
- Recovery my be considered if viewed to be in the best interests of the local consumers and market

NP Charging Considerations

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Market Size & Scale

Market Development

- Service Penetration
- State of Competition – Numbers and Stability

Impact on Operators & ability to invest

- NP vs Other Key Service/ Infrastructure CAPEX demands

Average ARPU

Existing consumer provisioning/ service charging approaches

Services/ Products impacted by NP

- Mobile, Fixed or Both?

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Impact of Charging – Example – Medium Market

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- 10 million subscribers
- 50% penetration
- 40 million issued numbers
- 4 operators
- ARPU - $3/ month or $36/ year
- Investment - $16 million – recoverable or not?
- 1% porting demand = 100,000 ports per annum

- Option A – Porting charge $2 – market charge = $200,000/ yr
- Option B – Porting Tax (Consumers) $1 per annum per active number – market charge = $10,000,000/ yr
- Option C – Porting Tax (Operators) $0.5 per annum per issued number – market charge = $20,000,000/ yr
- **Who Benefits?**

- Market Size - $1.8 Billion over 5 years
- Option A – 5 years
  - Set-up - $16,000,000
  - Porting Charges - $500,000
  - Total "Industry" Cost - $16,500,000
  - Cost per Port = $33
- Option B – 5 Years
  - Set-up - $16,000,000
  - Porting Tax - $50,000,000
  - Total "Industry" Cost - $66,000,000 or $34,000,000?
  - Cost per Port = $132 or $68?
- Option C – 5 Years
  - Set-up - $16,000,000
  - Porting Tax - $100,00,000
  - Total "Industry" Cost - $116,000,000 or $84,000,000?
  - Cost per Port = $232 or £168?

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Impact of Charging – Example – Small Market

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- 100,000 subscribers
- 90% penetration
- 1 million issued numbers
- 4 operators
- ARPU - $20/ month or $240/ month
- Investment - $8 million – recoverable or not?
- 5% porting demand = 5,000 ports per annum

- Option A – Porting charge $5 – market charge = $25,000/ yr
- Option B – Porting Tax (Consumers) $2 per annum per active number – market charge = $200,000/ yr
- Option C – Porting Tax (Operators) $1 per annum per issued number – market charge = $400,000/ yr
- **Who Benefits?**

- Market Size = $120,000,000 – 5 years
- Option A – 5 years
  - Set-up - $8,000,000
  - Porting Charges - $125,000
  - Total Market Cost - $8,125,000
  - Cost per Port = $325
- Option B – 5 Years
  - Set-up - $8,000,000
  - Porting Charges - $1,000,000
  - Total Market Cost - $9,000,000 or $7,125,000
  - Cost per Port = $360 or $285?
- Option C – 5 Years
  - Set-up - $8,000,000
  - Porting Charges - $2,000,000
  - Total Market Cost - $10,000,000 or $8,125,000
  - Cost per Port = $400 or $325?

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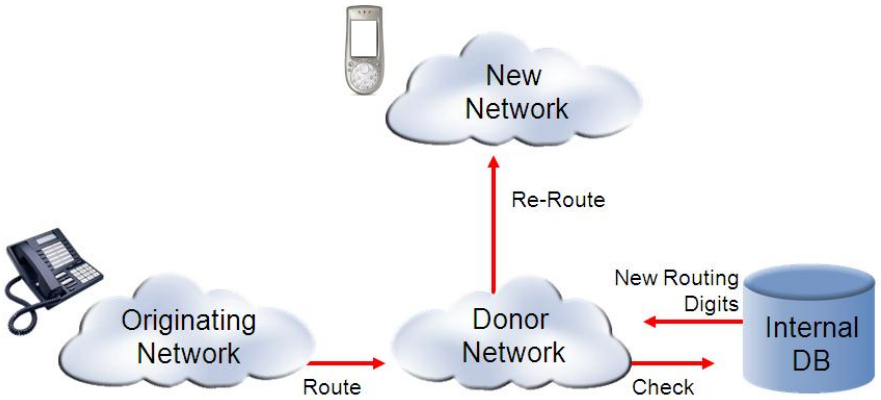
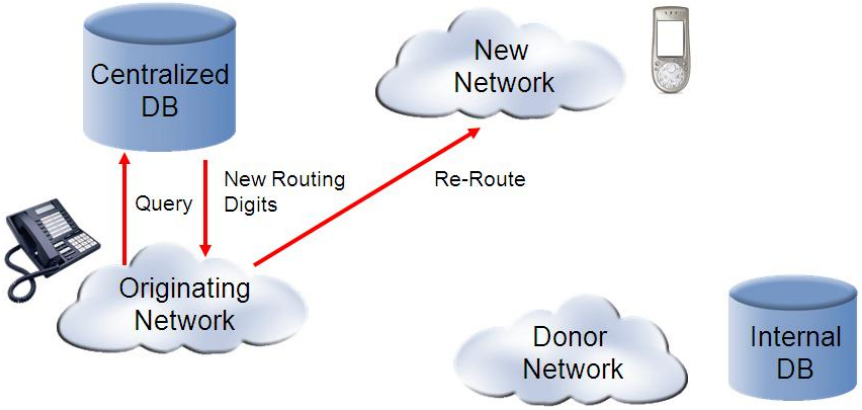
Transit Charging

- With ACQ direct routing all country originated traffic is routed directly and thus there is no transit charging
- Are there are any non fixed or mobile operators in Bahamas who will be originating traffic in Bahamas?
- Retail charging model in Bahamas?
  - Termination?
  - Sender keeps all
- What is status of Licenced International Carriers in Bahamas?
  - Involved in NP?
  - Access to the NP central dB?
- External/ International Operators have no access to the CdB & have to route via Block Operator/ Number Range Holder – Indirect/ Onward Routing
- Onward routing/ Direct routing – charges and framework for enabling block operator to charge for routing activity
  - Decrement or charge applied by Block Operator to either
    - Originating Operator?
    - Terminating Operator?
- Transit charges directly attributable to incremental NP routing activity only
- Determined by regulator
- Benchmarked and set against most efficient operator costs



International Originated Traffic Routing



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Charging Best Practice

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- No single model that fits every market – approach/ framework adopted should reflect the local environment
- Key focus to minimise or eliminate consumer NP charges – Critical for developing demand in low ARPU markets – Operator competition is likely to drive FREE porting
- NP charging should be directly related to incremental activity and born by the beneficiary
- Charges, approach and costs should be benchmarked and determined by effective tendering and analysis
- Set-up charges should be born by each stakeholder, unless it is proven that the overall NP investments are detrimental to the industry and consumer
- Regulator should set 3rd party access charging approach
- Transit charging may be required for international incoming traffic where international operators/ carrier do not have access to the central porting dB – transit charging approach determined by Regulator

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Data Protection & LEA considerations

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NP Data Protection & LEA/ 3rd Party Considerations

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- NP framework compliant with local & international data protection legislation and standards
- Central NP vendor – 3rd party processing local porting/ consumer data – Minimising risk of Data Protection breaches?
  - Minimise transfer of customer confidential data during NP process
    - Limit to MSISDN/ Operator – avoid name, address, dob etc
  - Specify international IT data management standards
  - Ensure NP vendor systems, data management & inter connection with Operators conform to international standards and best practice
- How will LEA/ 3rd Party access to the Porting Database be provided?
  - Who determines access rights?
  - Contractual/ operational access framework?
  - Charging mechanism? Who receives revenues?
  - Separation of porting/ routing database from porting process
- Alignment with SIM/ service registration requirements
  - Regulatory/ legal issues
  - NP = SIM Registration through the back door?

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Cross-stakeholder implementation management

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Number Portability – Phased Journey

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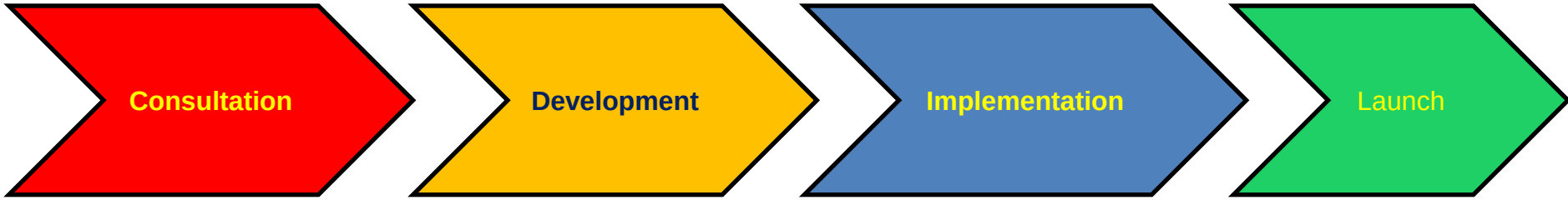

6 months – 2 years

- Led by Regulator
- Complete benefit assessment
- Define NP Approach/
- Consult with Stakeholders
- Implement licence/ regulatory changes

6 – 12 months

- Defined NP milestones
- NPC vendor selection
- Define NP requirements & business rules etc
- Establish stakeholder commitment and support
- Establish NP Pre-requisites

Mobile – 6-15 months
Fixed – 9-18 months

- Inter-Operator Working Group
- Develop & implement NP changes :
  - Routing
  - Provisioning
  - Porting Admin
  - Retail process
  - Regulatory
- Complete testing

1-3 months

- All
- Complete final readiness testing
- Progress NP promotional activities
- Complete operational handover

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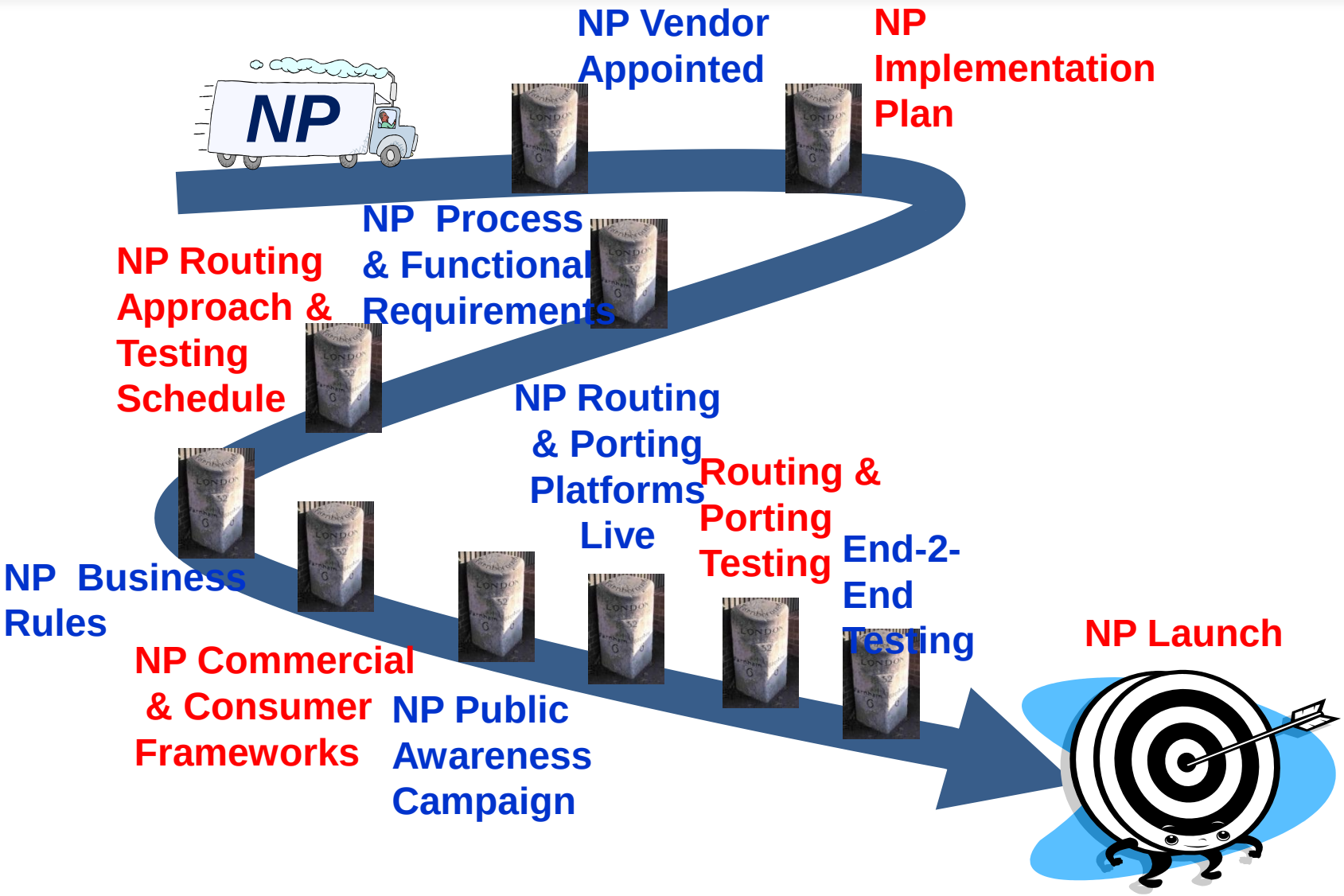
Cross Stakeholder NP Journey



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Simple & Clear NP Programme Framework is Vital

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Senior management commitment from Regulator and Operators is key – overseeing & agreeing key issues via a Steering Group

Single Working Group is most effective – depends on complexity & number of stakeholders

- Single senior & experienced attendees from each operator
- Seconded full-time for the MNP programme
- Bringing in functional experts/ sub teams AS REQUIRED

Keep the Working Group structure simple and avoid multiple workstreams – leads to confusion, delay & conflict

Regulator/ Consultant acting as central facilitator to drive, facilitate, mediate & advise ensures progress & momentum are maintained

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Effective Cross Stakeholder Collaboration is Key

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- Clearly defined work streams with roles/ scope
- Key milestones & deliverables defined and agreed early
- Strong programme management framework
- Regular reporting & progress tracking
- Issue control discipline
- Provide effective problem & dispute escalation avenues
- Expect the unexpected & don’t blame, be honest & open

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Drive through Storming as a key priority

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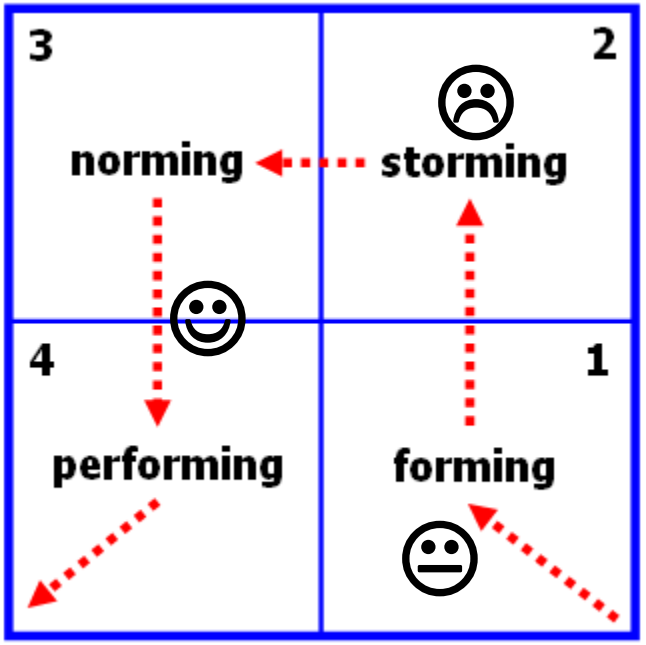
- Effective NP Implementation demands strong understanding of group behaviours
- Understand different Stakeholder agendas and viewpoints
- Identify potential conflict touch points early
- Build consensus where possible, but in the end strong direction may be inevitable



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NP Implementation Programme Structure

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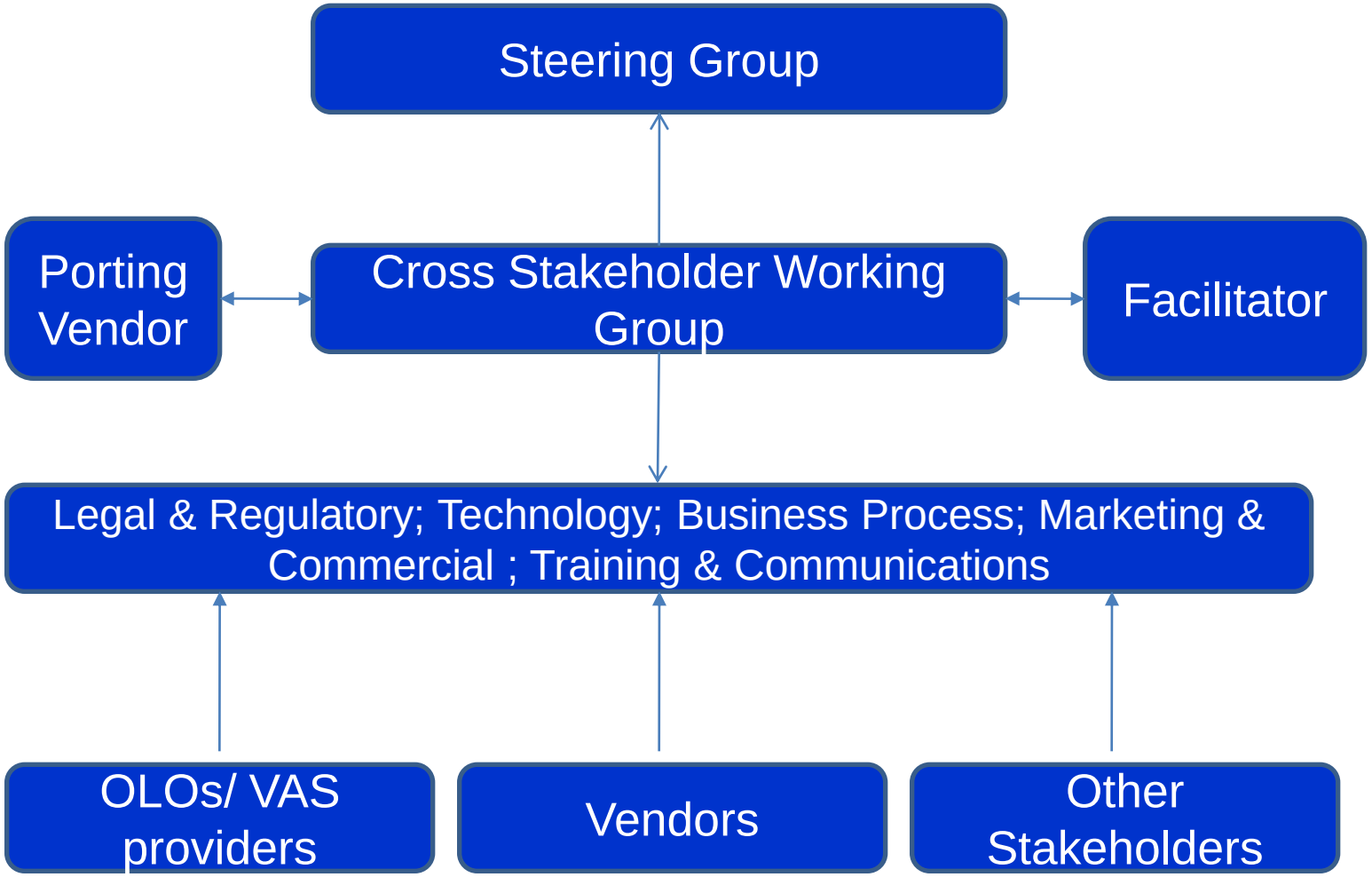

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NP Programme – Workstreams?

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Steering Group – Senior Management Owners & Sponsors - Review progress – Monitor/ review progress, resolve conflicts, provide direction on key issues and challenges

Working Group – Complete impact assessment, develop detailed actions/ project plan & deliver NP

Business Process – Impact assess & integrate NP into operational processes and functions

Legal & Regulatory – Lead engagement with Regulator and OLOs – Negotiate NP framework, process, rules & commercial elements. Provide support on legal & regulatory implications of NP to normal business functions.

Marketing & Commercial – Assess commercial impact on business, identify target retention/ acquisition market sectors/ segments, develop NP products & propositions, develop & deliver NP sales/ channel activities, develop & deliver NP marketing collateral/ media & engage customers.

Technology – Assess NP impact on core routing, ancillary network, interconnect and business/ billing/ CRM systems. Identify, develop and implement NP system/ platform upgrade and changes. Develop and complete NP internal & external interworking configuration and testing

Training & Communications – Assess NP training requirements and develop/ deliver necessary NP training across the organisation. Develop & deliver internal and external NP communications strategy and materials to optimise NP awareness within the organisation and to the public/ media etc

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Implementing Number Portability – How Long? Key Activites?

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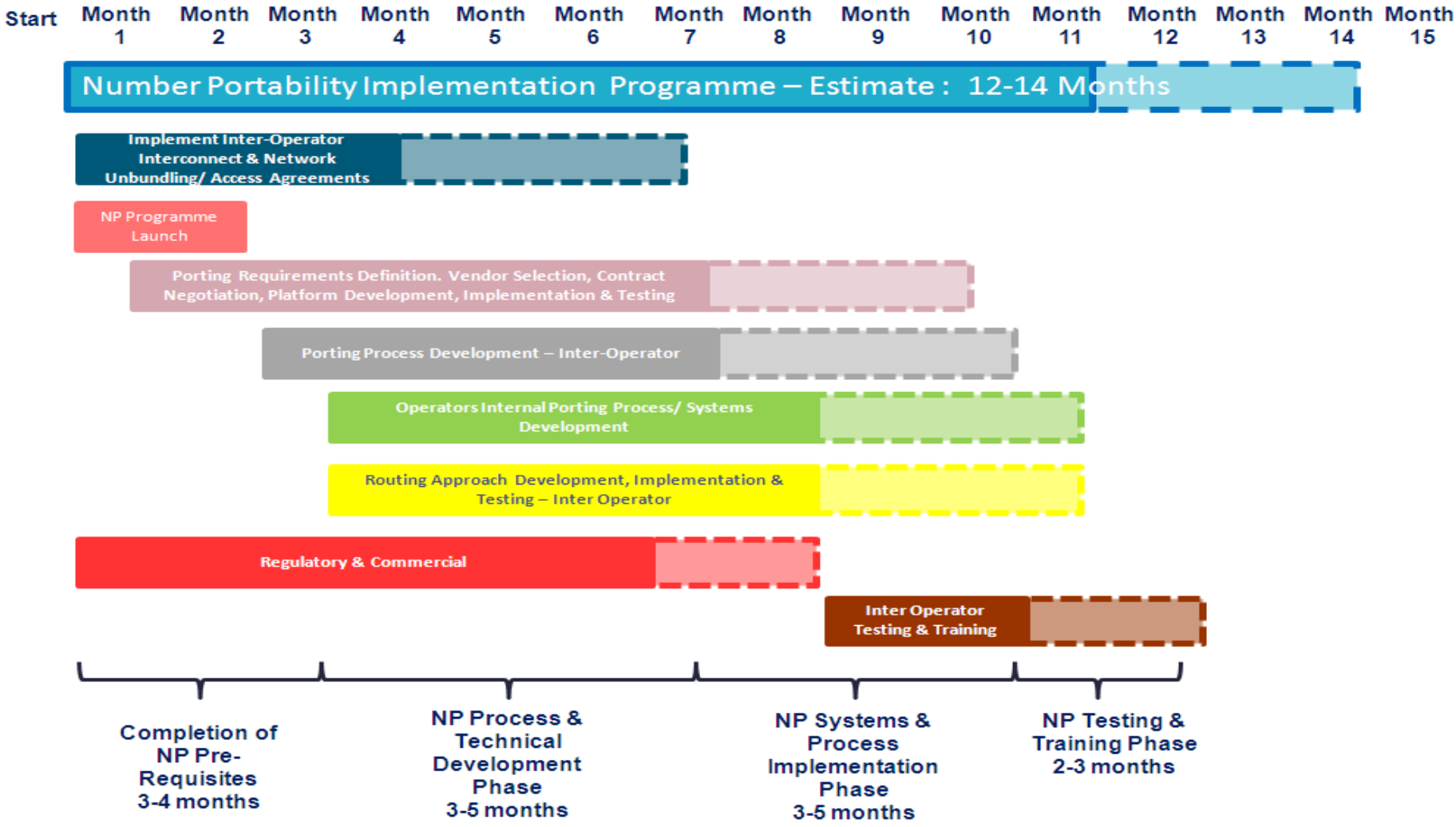

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Identify & Deal with NP Contentious Issues Early

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- Set-Up Cost Recovery Approach
- Routing Approach
- Porting Process
  - Retail Approach
  - Simplicity
  - Validation requirements
  - Rejection reasons
  - Treatment of Debt
- Business Rules, SLAs & Penalties
- Consumer Education & Awareness
- Winback
- Porting Charging
- Transit Charging

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Post Launch Regulatory Considerations

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NP Post Launch Handover

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- **Often overlooked ! Post Launch – Porting is a normal service but the market will never be the same again!**
- Who is responsible for the operational management of porting – regulator/ operators?
  - Porting performance tracking - reporting
  - Recovery of porting costs/ fees
  - Are the NP business rules, process & functional requirements effectively established and managed across the operators' businesses
  - Dealing with porting problems/ issues – escalating/ co-ordinating with other operators
  - Evolving porting business rules and processes
- Important that Operators implement NP effectively and NP performance is monitored -
  - Porting Business Rules are translated into clear operational processes
  - Porting resources have suitable tools, systems & clearly defined roles
  - Effective and positive communication channels are established with the porting functions of other operators
- Where does porting sit in the regulator and operator organisations?
  - Sales? – Winback issues?
  - Customer Services
  - Operations
  - Recommendation – Porting should be aligned to the management of normal customer activation/ provisioning activities

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Managing NP does NOT stop after launch

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Operational Working Group – different people to implementation team – handover is key

- **Review Porting Vendor Performance**
- **Review NP demand & Operator Performance**
- **Identify & address operating and process issues**
- **Consider improvements and scope evolution**

Dealing with Consumer Complaints & Queries – Set-up Consumer Helpdesk or refer to Operators?

Monitoring Stakeholder Performance & Behaviours

- **Mediating & resolving issues and escalations**
- **Investigating NP issues and driving resolution**
- **Punishing inappropriate behaviours and performance non-compliance**

Promoting NP to the public & media to drive awareness & demand – Regulator or Industry?

Evolving/ expanding NP

- **New market sectors & technologies & services**
- **Refining and improving the NP efficiency and experience in line with best practice**

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Ensuring Appropriate NP Behaviours and Performance

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Regulator's Role in Driving NP Compliance Across Stakeholders

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- Clear & Ongoing NP Education & Communication with Public – don't forget NP just because it has launched
- Proactive Customer Complaint Process & Monitoring
  - NP helpdesk
  - Multiple Consumer Engagement Channels - Social Media etc
- Effective and constant monitoring of porting performance – stakeholders
  - Central Porting Database Reports
- Effective Punitive Framework
  - Legislative/ Regulatory Imperative
  - Clearly Sanctionable Offences
  - Robust Penalty Mechanism
- Mystery Shopping
- Ongoing & Regular Operational Working Group Review
  - Open & Constructive Engagement
  - Problem Resolution
  - NP Process - Improvement/ Evolution

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NP Sanctionable Offences

- Failure to implement NP systems and procedures as and when directed by the Regulator
- Failure to submit a porting request on behalf of each qualified requesting customer
- Submitting a porting request without customer consent on an approved and completed porting request form
- Donor modifying the account status of a customer on the basis of the customer having sent a validation SMS to NPSP
- Donor modifying the account status of a customer on the basis of having received a porting request in respect of their number (except for terminating account in the case of a successful port)
- Providing in any medium false, inaccurate, or misleading information related to the porting process
- Providing false information in any report to the Regulator
- Failure to obtain customer's informed consent to porting before submitting a porting request in his/her behalf
- Failure to notify a porting customer that his/her account at the donor network will be closed upon completion of the porting process
- Failure to instruct/assist a porting customer to send the validation SMS subsequent to his/her signing the porting request form
- Failure to advise a porting customer as to the procedure followed after instruction request is sent
- Failure to incorporate broadcast messages from NPSP into local database immediately and automatically
- Failure to route calls and messages according to local database
- Failure to keep local database synchronized with central database
- Failure to adhere to incoming international SMS routing directive
- Failure to permit customers to send free SMS to NPSP at the assigned short code unless entire account is barred
- Failure to provide the Regulator access to employees and agents in the course of an investigation
- Providing false or inaccurate information to a customer or potential customer regarding the porting process
- Providing false or misleading information regarding network attributes and customer proposition to a potential customer with the intent of enticing him or her to assent to porting
- Failure of a donor to submit an authorization response within the permitted interval after transmission of the authorization request
- Rejection of an authorization request without citing a true and permitted basis
- Donor contacting a porting customer prior to completion of the porting process
- Failure of recipient to send instruction request in a timely manner
- Failure of donor to deactivate a ported number in a timely manner
- Assigning an inactive ported number to a new customer
- Failure to report and repatriate inactive ported numbers as and when directed by the Regulator
- Failure to submit authorization requests as and when initially generated
- Abuse of the emergency restore process to circumvent the 30 day rule.

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Thank you

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