VisionNG DLT for Number Assignment, Services and Number Portability

Section 1: Summary

Use Case summary			
Use Case ID:	**ICT-006**	**Use Case Type:**	**Vertical**
Use Case Title:	**VisionNG DLT for number assignment, services and number portability**	**Domain:**	**Telecommunications**
Stakeholder:			
Value Transfer:	**Yes, currently not in use**	**N. of participants:**	**3**
Data:	**Contractual rules, chain of contracts, services type**		
Users:	**30000**		
Identification:	**You can participate anonymously only for specific services**		
Predicted Outcomes:	**Fast assignment, number and service portability with legacy fall back on DNSSec**		

Overview of the Business Problem or Opportunity
Fast and scalable system for service and number portability
Why Distributed Ledger Technology?
There is no current solution for global number and service portability that provides fast cost effective and scalable technology that provides for global services deployment.

Section 2: Current process

Current Solutions
There are some parts available that provide some services like number resolution, but don't support any contractual system like number assignment or portability

Existing Flow (as-is)		
Step	**User Actions**	**System Actions**
1.	**Manual interaction**	**Manual action via operator**
2.		

Process scheme (as-is)
Single regions Sparse service

Data and information (as-is)		
Data	**Type**	**Description**
1	**Documents**	**Manual, physical paper work**
2	**Payment transactions**	**Billing for services**

Participants and their roles (as-is)		
Actor	**Type/Role**	**Description**
1	**Telecommunications operators**	**Provide numbering resources and services**
2	**Users**	**Request and receive resources and services from operators**

Other Notes

Section 3: Expected process

Expected Flow (to-be)		
Step	**User Actions**	**System Actions**
1.	**Interact with the system via contract backed by smart contracts**	**Issues keys, and store and executes smart contract roles, stores record and syncs with legacy systems**
2.		

Process scheme (to-be)

Participants and their roles		
Actor	**Type/Role**	**Description**
1	**Telecommunications operators**	**Make arrangements to enable keys to be issued, to store and execute smart contract roles, to store records and sync with legacy systems**
2	**Users**	**Interact with the system via contract backed by smart contracts**

Data and information		
Data	**Type**	**Description**
1	**Transactions**	**Assignments, reclamations, changes, etc.**

Data and information		
Data	**Type**	**Description**

Security and privacy
Entities are represented by cryptographic keys and specific smart contract are issued per region / service

Main Success Scenario
Number resource is available on Global Cloud DLT DApp platforms for global application and service delivery

Conditions (pre- or post-)

Performance needs
Current number portability solutions take days where semi distributed system like DNS take milliseconds

Legal considerations
Must comply with national regulatory requirements

Risks

Special Requirements
Implementing Number and services management platform to interact with the existent DLT systems

External References and Miscellaneous

Other Notes

Appendix 1

Domains for use cases categorization

Blockchain/DLT offers capabilities suitable for a wide variety of uses and purposes in many different domains and types of applications. There are 2 main types of DLT-based applications and services:

- Vertical applications and services (e.g., telco, fintech, supply chain, energy)
- Horizontal (infrastructural) applications and services (e.g., data usage control, identity management, security)

Vertical use cases could be categorized to domains according to the list below (note, that the list is not exhaustive):

1. Finance
    a) Financial management & accounting
    b) International & interbank payments
    c) Clearing and settlement
    d) Reduction of Fraud
    e) Financial messaging
    f) Asset lifecycles and history
    g) Trade finance
    h) Regulatory compliance & audit
    i) AML/KYC
    j) Insurance
    k) Peer-to-peer transactions
2. Healthcare
3. Voting
4. Smart manufacturing
5. Intellectual property management (Digital rights management)
6. Supply chain and inventory management
7. Media
8. Energy
9. Government and public sector
    a) Taxes
    b) Government and non-profit transparency
    c) Legislation, compliance & regulatory oversight
10. Real estate
11. Taxation and customs

Horizontal use cases could be categorized to domains according to the list below:

1. Identity Management
2. Cybersecurity
3. Big data

4. Data storage (Inter-organizational data management)
5. IoT

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