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Costing of Services for Converged Networks

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Agenda

- **Implications of Costing Current “Converged” Networks**
- **“True” Convergence - The NGN**
- **New Costing Paradigm**
- **Application of Costing Concepts**
- **Current Challenges to Regulator**
- **Possible Responses**
- **Conclusion**

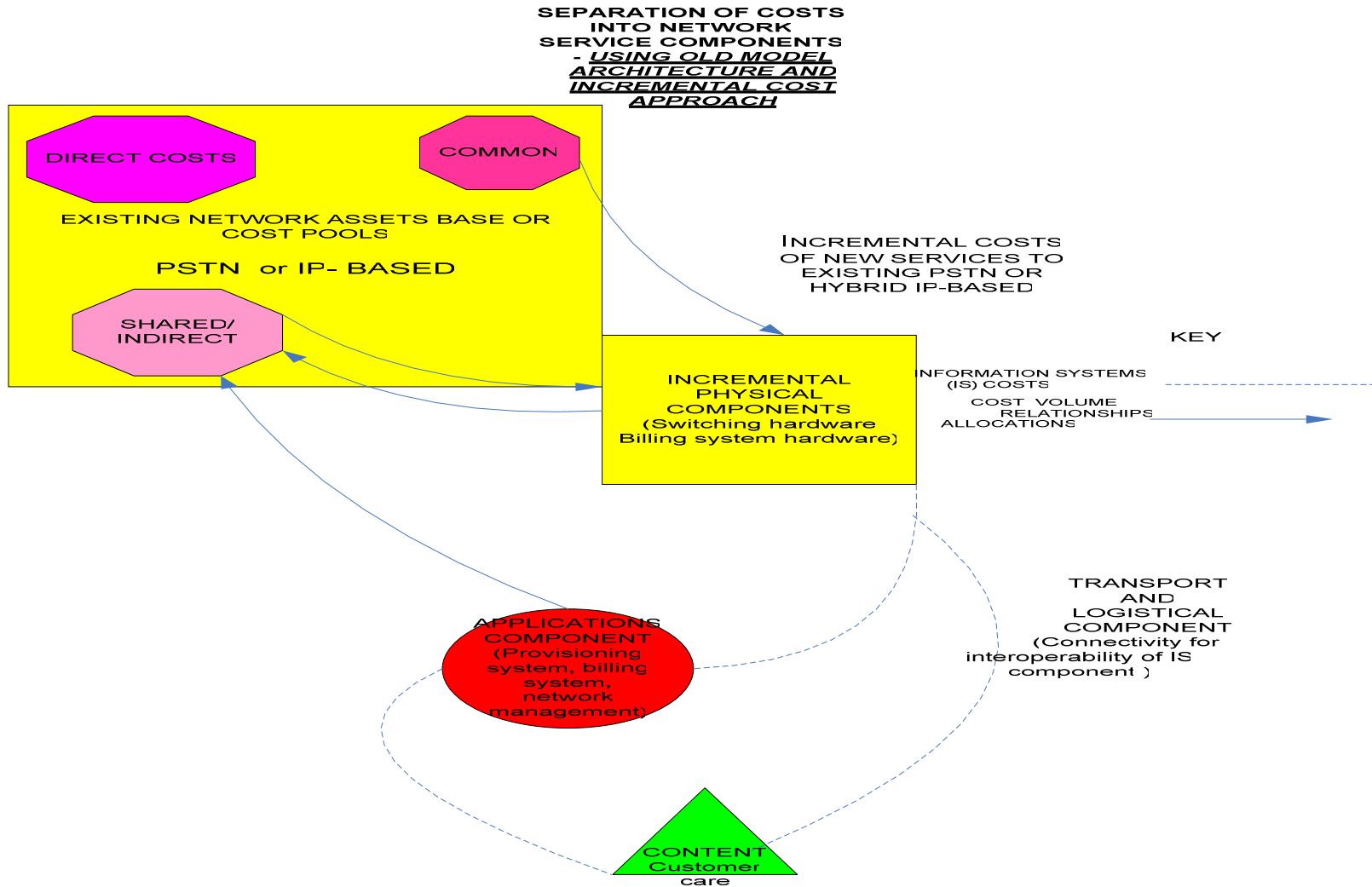
Implications of Costing Current “Converged” Networks

- Interchange between data and voice not possible on familiar tools - Digital switches talk to POTS over DSL, but must ignore rest
- Still two networks data and voice
- Now the advent of DSLAMs and media gateways are profoundly uniting voice and data

Implications of Costing Current “Converged” Networks

- Multiple Technologies combined;
IN, IP Transit, IP-VPN, DSL, WiFi, WiMAX
Mobile generations.
- High level of component sharing, many
combined technologies – questionable
QoS and Security.
- Incremental costing for new services
(direct costs and share of indirect and
common costs) Fig 1

Implications of Costing Current “Converged” Networks.



Implications of Costing Current “Converged” Networks

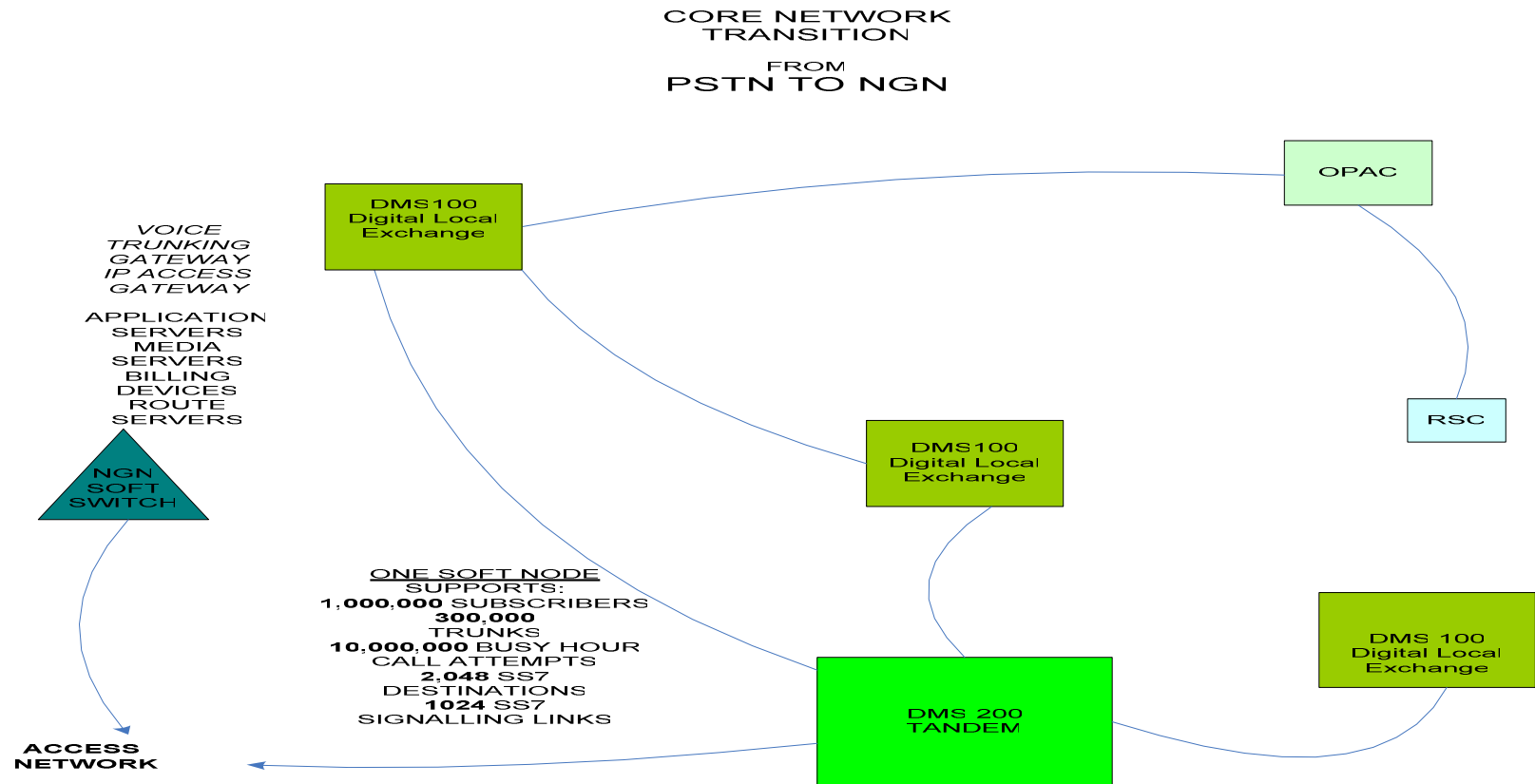
- The proliferation of overlays now done to existing PSTN, IP and Mobile networks add great complexity to analysing cost causation of every individual service.
- Cost causation by services linked to diverse sets of usage parameters attributable to each network functional layer

Implications of Costing Current “Converged” Networks

- IP-based Network lend easily to costing network layers, and assigning each service’s usage of the specified layer through a relevant cost driver
- TDM networks do not lend to layer functionality but to a functional network structure of - access, core and other.
- Currently we have transient IP-based and TDM networks combined

Implications of Costing Current “Converged” Networks

- Current manufacturers offer a transition from PSTN to full NGN in phases:



“True” Convergence

- **True convergence entails tools - doing the same things we do in the data world with voice and vice versa. E.g. Microsoft Outlook to read email and Interactive Voice response (IVR) to check voice mail then, consider the converse.**
- **NGN unlocks the power of service creation - into the hands of service providers and their customers**

“True” Convergence

- Any-to-any endpoint interoperability , enhanced services, user self-provisioning of desired features, and flexible billing –all on one network.
- Achieving Carrier-Grade Status with Convergence
 - Reliability – exceed PSTN capability of 99.99 availability
 - Scalability - centralised solution less scalable than a distributed one
 - Primary Line capability
 - Lifeline Service-pinpoint location fo incoming call
 - Lawful intercept- identify and control legally intercepted calls

“True” Convergence

Software-on-a-switch – provides voice signalling and control using open standards-based protocols. The heart of NGN, the new paradigm.

Between PSTN and true convergence lies a possible period of malaise for costing concepts that attempt to reflect cost causation.

True convergence - a long-run average-capacity measure, for usage of network components and network ops costs

New Costing Paradigm

- The drivers of PSTN network costs:
 - Call switching – circuit usage
 - Call Conveyance
 - Other Facilities usage

make way for new cost causation relationships:

- Centralised/Distributed Network Applications
- Interfaces to NGN - from multiple platforms such as:
 - Operator services
 - Intelligent network services
 - multi media services
 - Broadband access services

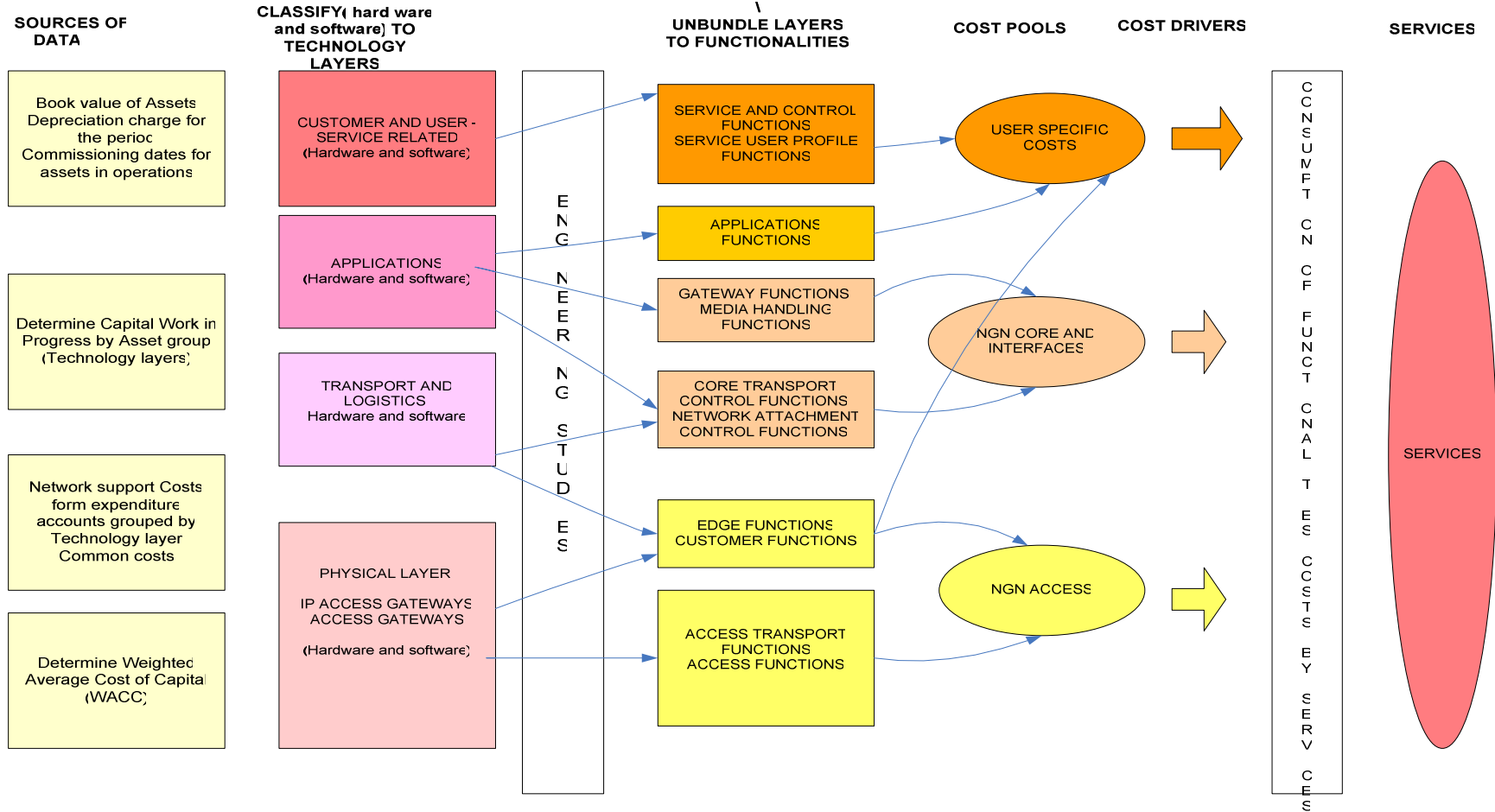
New Costing Paradigm

Network Functionalities and Service Parameters to cost, such as:

- Protocol conversion,
- Gatekeepers,
- Applications,
- Billing,
- Costing,
- Customer management,
- Provisioning,
- E-commerce,
- Fraud control,
- Authentication,
- Security and
- Network Management.

will be the key to deriving cost structures of services

Application of Costing Concepts to Next Generation Services (cost architecture for NGN)



Application of Costing Concepts

- Hardware and software deployed in NGN can be assigned to “technology layers” - as asset classes within “equipment cost ledger/asset register”.
- Each “technology layer” dissected into service-forming/service building/service sustaining functionalities.
- Group functionalities into “service creation” cost pools such as:
 - User specific costs
 - NGN core and interface costs
 - NGN access costs

Application of Costing Concepts

Confine the direct and indirect costs of initiating new services (*cost of functionalities*) to the cost pools and develop suitable cost drivers that build up plausible costs-of- service.

Drive “common costs” to services using cost drivers relevant to the manner the particular common costs are incurred.

Current Challenges to Regulator

- Issues of standardisation remain as the ascendancy of protocols continue. What will pervade for the Converged network
 - Stranded investment considerations
 - Incentives to overcome bad investments
 - Promote NGN development over tighter timeframe to streamline service advancement

Current Challenges to Regulator

- Transition networks between PSTN and NGN will strain application of current costing methodologies. Regulators become unable to;
- Devise robust generic costing methodologies
- Challenge operators' service costing
- Effectively compare costs from operator to operator

Possible Regulatory Responses

- Maintain Same Overarching objective – drive and foster development through innovation, creativity and productivity growth – maintain social and economic welfare
- Use understanding of the operational structure of the technological developments as best guide on how to keep it intact, going forward.
- Many say, regulate to uphold the structural layers within which the technologies unfold or subsist- this is best approach

Possible Regulatory Responses

- Adopt to regulate layers but leave service innovations to the market.
- Continue with old form of regulation and amend for new form in developmental phases.
- Contemplate the key areas of change and only address those as the new regulatory focus.

Conclusion

- “True” convergence around the corner
- PSTN costing paradigm must give way to NGN costing paradigm
- Less complexity likely with fully converged networks – costing based on average usage of network functionalities by services being created, over the long run.
- Malaise of costing methodologies during transition to full NGN – costing freeze worth consideration?
- Regulators should consider investment incentives to hasten cut over to NGN – must be based on strong business case.

THANK YOU ALL VERY MUCH!

- ANY QUESTIONS BEFORE WE GO?

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