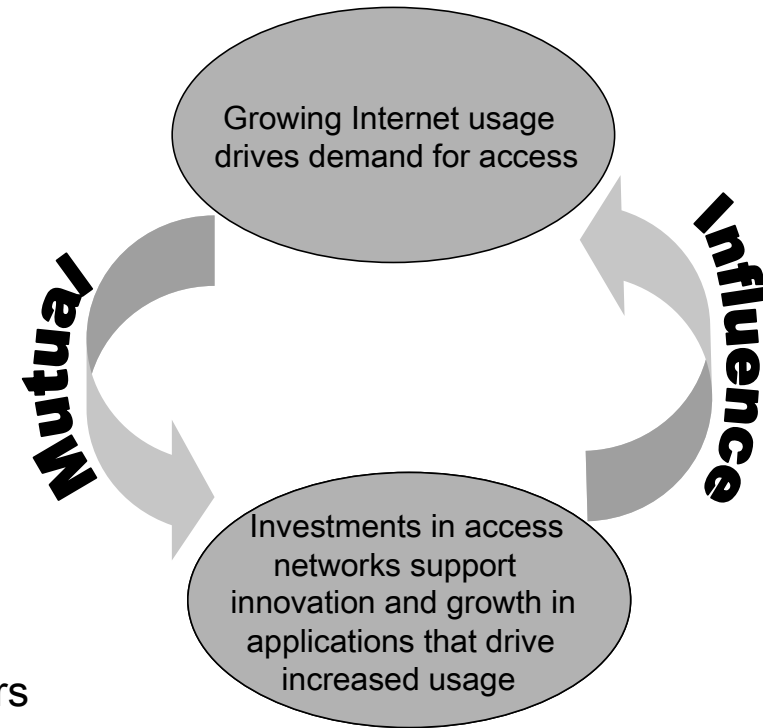# Vision of Personal Broadband

Proposal for
Broadband Working Group,
Communication Futures Programme
Version 0.4

History & Motivation

➢ Goal of BBWG is to promote virtuous cycle of growing Internet usage and further investments in broadband access

➢ Groups of Activities:

    ➢ Identify barriers to the cycle

    ➢ Create new context to extend the cycle (PBB)

➢ Idea proposed in October 2004

➢ Reviewed in November 2004

➢ Presented in January 2005

➢ Version 0.2 discussed in March 2nd conference call

➢ Version 0.3 discussed in April 13th conference call

➢ Agreed to complete the vision before identification of barriers

➢ Hoping to get agreement for the white paper and start the next phase: Business Architectures & Identification of Barriers to Success

Growing Internet usage drives demand for access

Investments in access networks support innovation and growth in applications that drive increased usage

Mutual

Influence

BBWG, CFP   For Discussion   Personal Broadband
Hossein Moiin
May 8th, 2005 page 2

Context

➤ Connectivity to the virtual world and services is becoming a key enabler of economy

➤ Connectivity is being provided by a variety of service providers (fixed, wireless and mobile) making making "Access Everywhere" a reality

➤ Choice of connectivity allows the connection to become "personal" as user can personalise his or her access according to a particular context

➤ Personal services tend to be more successful and create further areas for investment

➤ Assumption: Broadband can benefit from "going personal", i.e., supporting the creation and delivery of personalised services over the medium

➤ Observation: Broadband is not an application; it is "infrastructure"

Broadband is any data connectivity that allows *satisfactory** consumption of remote applications or content by a user

Personal Broadband

Personal Broadband is a set of capabilities and interfaces that allow users (or their agents) to select the connection that best meet their needs within their particular context

Attributes

- Focused on providing the most suitable connection as defined by the user
- Enhances the personal nature of applications and content accessed through it
- Compatible with commercial and non-commercial access service relations which can be long or short-lived (adhoc)
- Compatible with existing investments
- Can be realised as a service, or offered as a product, by one or more service providers
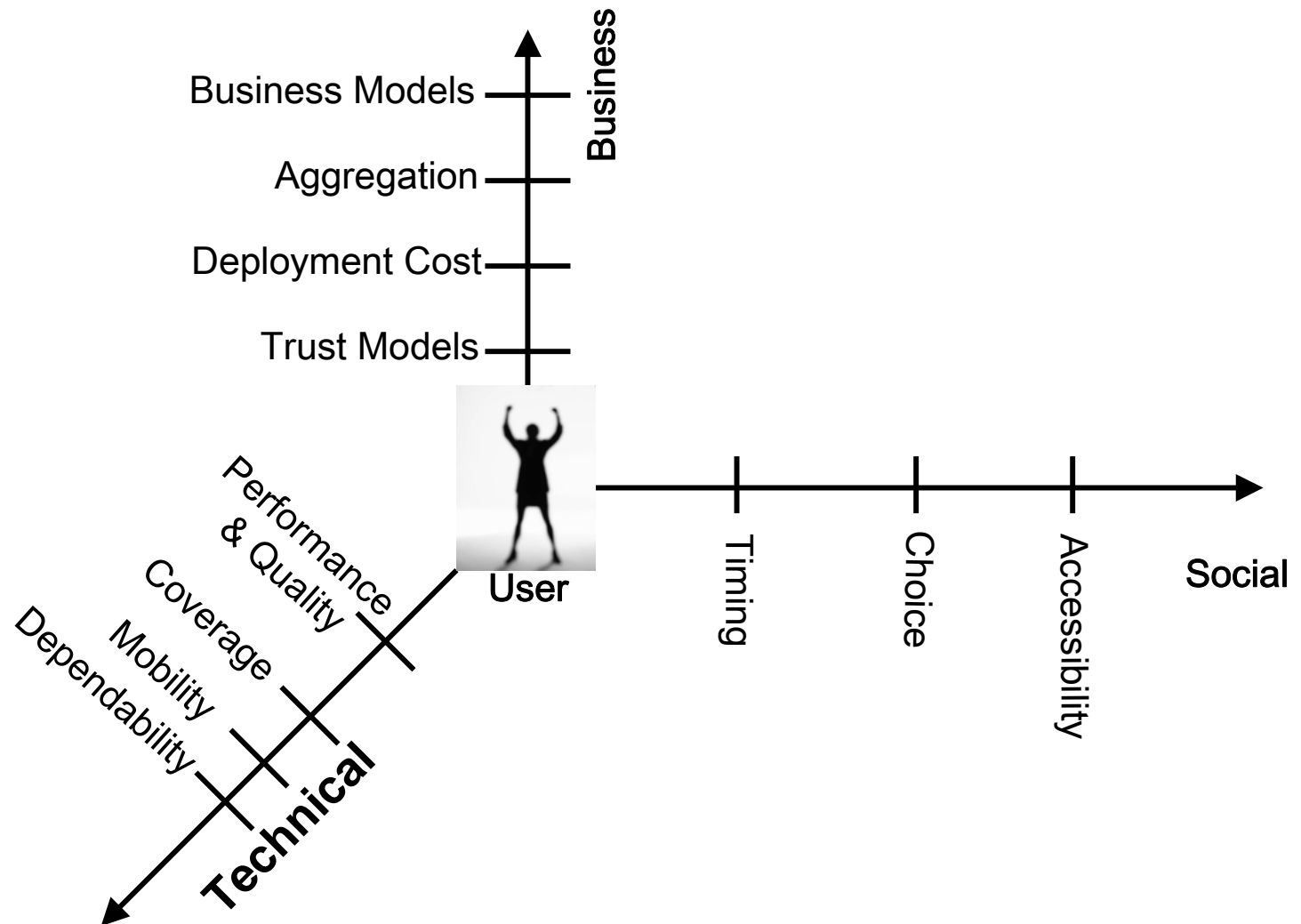
Capabilities

- Ubiquitous: available "everywhere" and "always-on"
- Provides options to users to choose from among multiple providers
- Provides flexible treatment of user's information (e.g., their identities or how much of their profile information is to be "passed-on") based
- Maintains the integrity of content as it passes through the network
- Provides dependable (trustworthy) access to applications and content from any device

Interfaces

- Open to applications and devices
- No particular device or application is assumed
- Focused on layers 1 to 3 of ISO stack (Physical, Data Link, and Network)
- Defined to support higher level functionality required for realisation of PBB
- Allows for explicit passing of contextual information from user to application and vice versa

Personal Broadband will be realised through complementary devices, core and access networks, applications and content, and the required supporting infrastructure working in concert

Dimensions of Vision

Business Models — Aggregation — Deployment Cost — Trust Models — (vertical **Business** axis)

Performance & Quality, Coverage, Mobility, Dependability — (diagonal **Technical** axis)

User

Timing, Choice, Accessibility — **Social** (horizontal axis)

Differences with Existing Approaches

- IMS (& UMA)
  - Service specific
  - IMS is based on three layers; access, session control and, application

- IRAP:
  - Considers the relationship between consumption, access & home providers
  - Considers only limited cases (long-lived parties, assumes home provider is a separate entity than user)

- Both IMS & IRAP can/should be part of PBB continuum; they address different aspects

- PBB allows creation of new opportunities beyond the current state of art; examples include:
  - New Access Provider: Mobile Pico-Operator offering a bridge to WLAN or "3G" via lending of access rights to other parties
  - Complex Service Aggregator: Instant Collaborator or Weekend Planner using any device and/or any network to accomplish a given task
  - Direct-Link: Account at "MGM" realised through a number of distribution channels
  - Borrowing Bits: Lending access rights to family members in the mall (i.e., extending network utility to local activities)