



Wificom as a Facilitator of Multilateral Subscriber Roaming through the Pass- One Association

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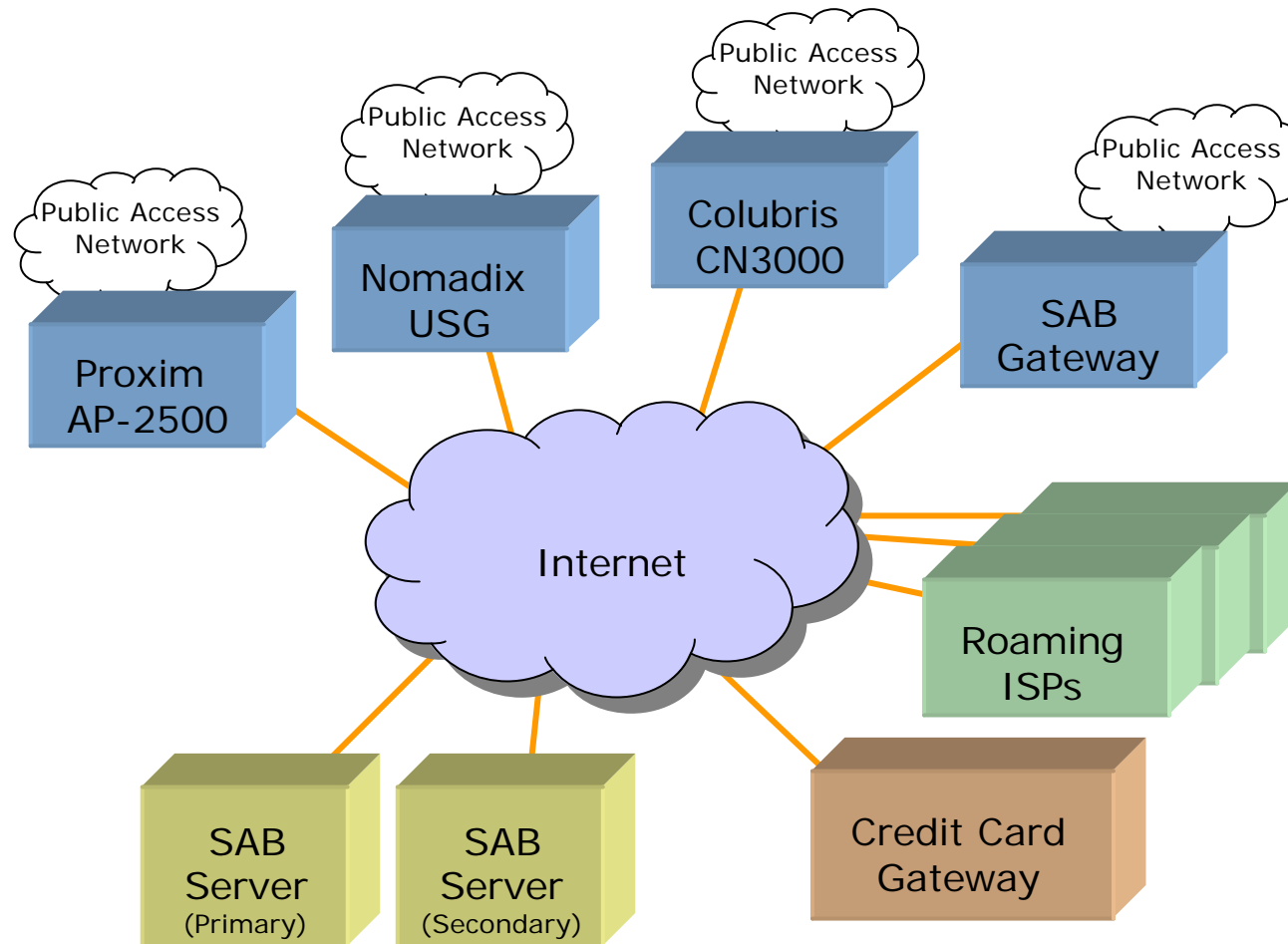


- Grew out of the WISP business (WIFINET Services)
- Intimate knowledge of the end-user needs, hotelier and conference centre industries, as well as SP biz models
- Team has solid experience in the European Telco, ISP & Mobile Operator segment as well as software development/IT.
- Today focusing on technology vendor's role (Wificom Technologies), supplying an open, economically scalable SP platform (SAB™) that integrates with 3rd-party GWs



- Co-founded by Wayport, Wificom, Tele2, Fatport and Open Point Networks. Excilan as secretariat.

Overall Wificom SAB™ Architecture



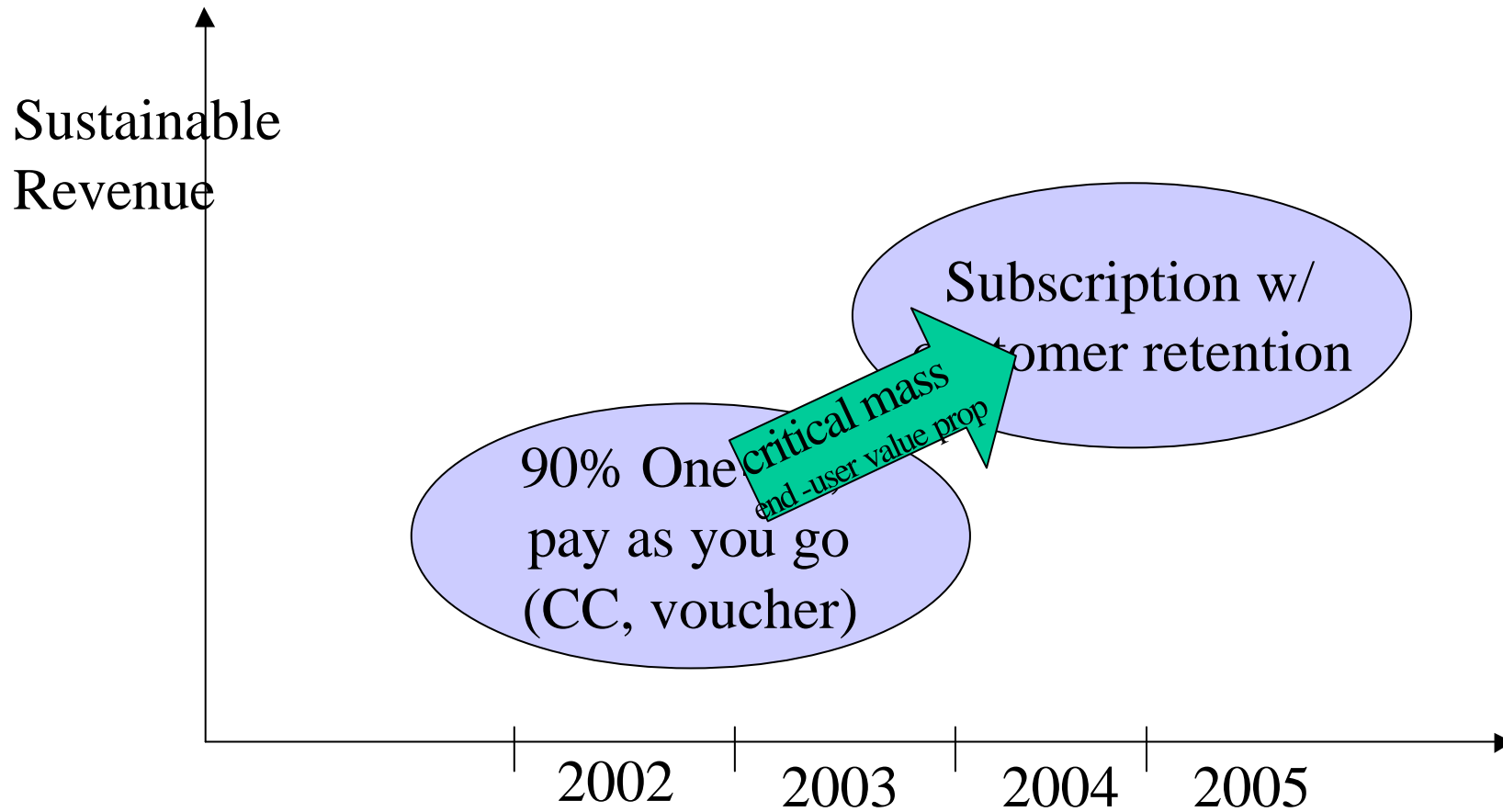
- Monthly eat-all-you-can subscription: not enough footprint

- Any procedure which requires subscription/registration prior

GSM ^{to use} biz model ~~≠~~ WLAN biz model

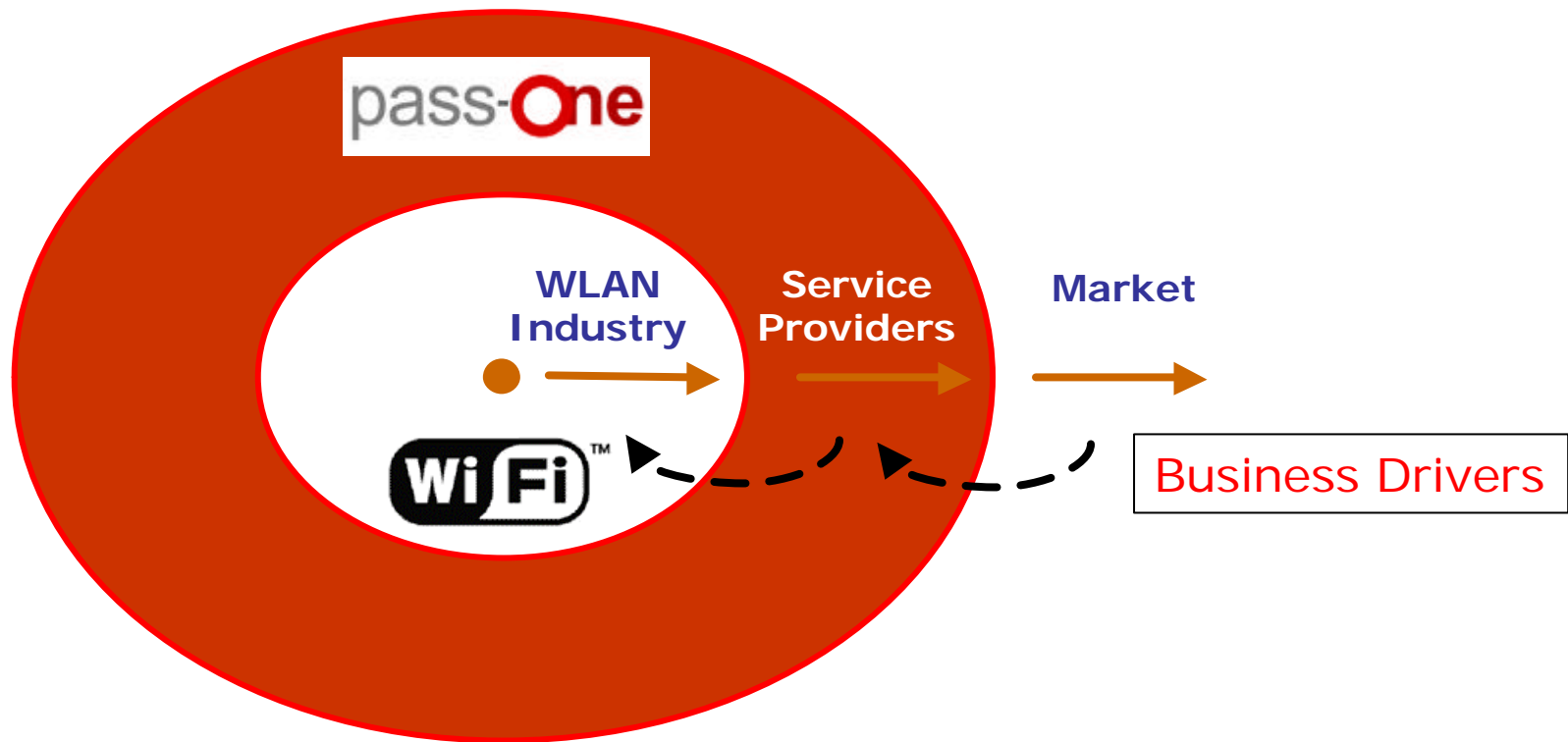
- "Solutions" requiring installation of specific software on users' computers
- Outdoor public access: commercially not a feasible proposition outdoors, technically not possible to use indoors
- Reliance on hotspots where business users don't congregate
- Reliance on a single technology (WLAN)
- Spotty coverage/discontiguous zones
- Total investment borne by the WISP

Wireless ≠ mobile



- Pass-One is concerned with end-user ie. authentication roaming, not with seamless handover between or within technologies/networks.
- No mobile operators offer WLAN services to roaming users based on SIM authentication
- Many service providers offer WLAN services to roaming users based on RADIUS proxying (esp. US)

pass-One multilateral roaming framework for WLAN based on RADIUS, demonstrated.





- home ○
- mission statement ●
- member companies ○
- join WECA ○
- learning zone ○
- technical information ○
- WECA in the news ○

Mission Statement

WECA’s mission is to certify interoperability of Wi-Fi (IEEE 802.11) products and to promote Wi-Fi as the global wireless LAN standard across all market segments.

WECA’s WISPr working group addresses similar topics as Pass-One but

- *WECA remains a hardware vendor association in the end*
- *no MRA*
- *Tied to a single technology (does not embrace VBN: wired, Bluetooth,...)*

- Supply side:
 - Multilateral Roaming Agreement (MRA), and
 - Service standardisation, both to minimise overhead
- Demand side:
 - The Service Mark, **pass-One**
use of which is controlled, to increase end-user awareness and to come up with a critical mass of hotspots

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A Membership Association

Jointly owned by more than 21,000 member financial institutions around the globe, Visa's mission is to enhance the competitiveness and profitability of its members. While **Visa itself does not offer cards or financial services directly** to consumers and merchants, it plays a pivotal role in advancing new payment products and technologies on behalf of its members. And Visa member institutions offer the industry's widest range of payment products and services.

The Value of the Brand

The Visa member bank **brand** and the **Visa service mark**, working together, continue to enjoy unprecedented success in the marketplace. Consumers consistently choose Visa over any other major payment brand, market research and usage statistics validate.

Create a single global market.
Optimize the roaming environment.
Facilitate the existence of multiple WISPs.

This translates quite simply to
satisfied customers through seamless roaming.

- Make it a non-profit organisation around the interests of the members,
- Let it be driven by WISPs, « By the market, for the market »,
- Get Promoting Participants around the table
- Work around Business and Technical issues (BWG and TWG),
- Listen to the feedback from the WISP community also outside the members

- Roaming works between the Founding Members, in a multilateral fashion.
- Solid legal framework protecting the interests of the members and delivering the services,
- Clear Mission and goal in providing a multilateral roaming environment and service mark,
- It is ready to take off and welcome new members and participants as of Jan 2003!

Services are being delivered by member organisations and third parties (PR, lawyers,...)

- Multilateral roaming administration,
- Standardisation methodology
- Intranet with closed user groups,
- End user information portal,
- Service mark and certification,
- Secretariat

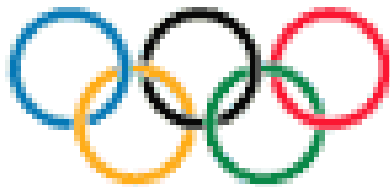
- Each Member publishes its Default Wholesale Tariff to all other members;
- To begin, tariff is set with reference to *time* and each of the following 3 main options have to be supported:
 - 1. Charge per minute (with ability to charge for a minimum period);
 - 2.a. Charge per 1, 4 and 24 hours after logon, *or*
 - 2.b. charge for 00.00 to 24.00 (calendar day charge, variation allowed);
 - 3. Free of charge (still implies requirement to authenticate and locate).
- These tariffs can be set per venue by the visited WISP;
- Tariffs are set in local currency and are exclusive of tax;
- The Default Wholesale Tariff shall not be more than the highest single use price at that venue.

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A global service mark



STARBUCKS.CO



- Consumers are comforted by global service marks, defined standards and the associated accountability they represent.
- Across regional and national boundaries the perception exists that accountable or quality service fails or is lacking.
- Positive assistance we provide to consumers to enable and influence purchasing decisions benefits us all.
- Ideally our customers want a common user experience in much the same way that VISA or Starbucks provides their customers.
- When your customer goes to another region or country and are looking for service they are more likely to use service that has characteristics common with the service you provide them.

Case Study: FatPort

- Currently 11 service zones in Vancouver, Canada. Growing service to 45 service zones Western Canada by the end of 2002.
- In our retail business we have three customer profiles:
 - Homebase: Users from our coverage area who do not move into other regions
 - Outbound: Our customers leaving our coverage area and crossing into other regions
 - Inbound: Global customers looking for service as they enter our geographic region

Case Study: FatPort (cont...)

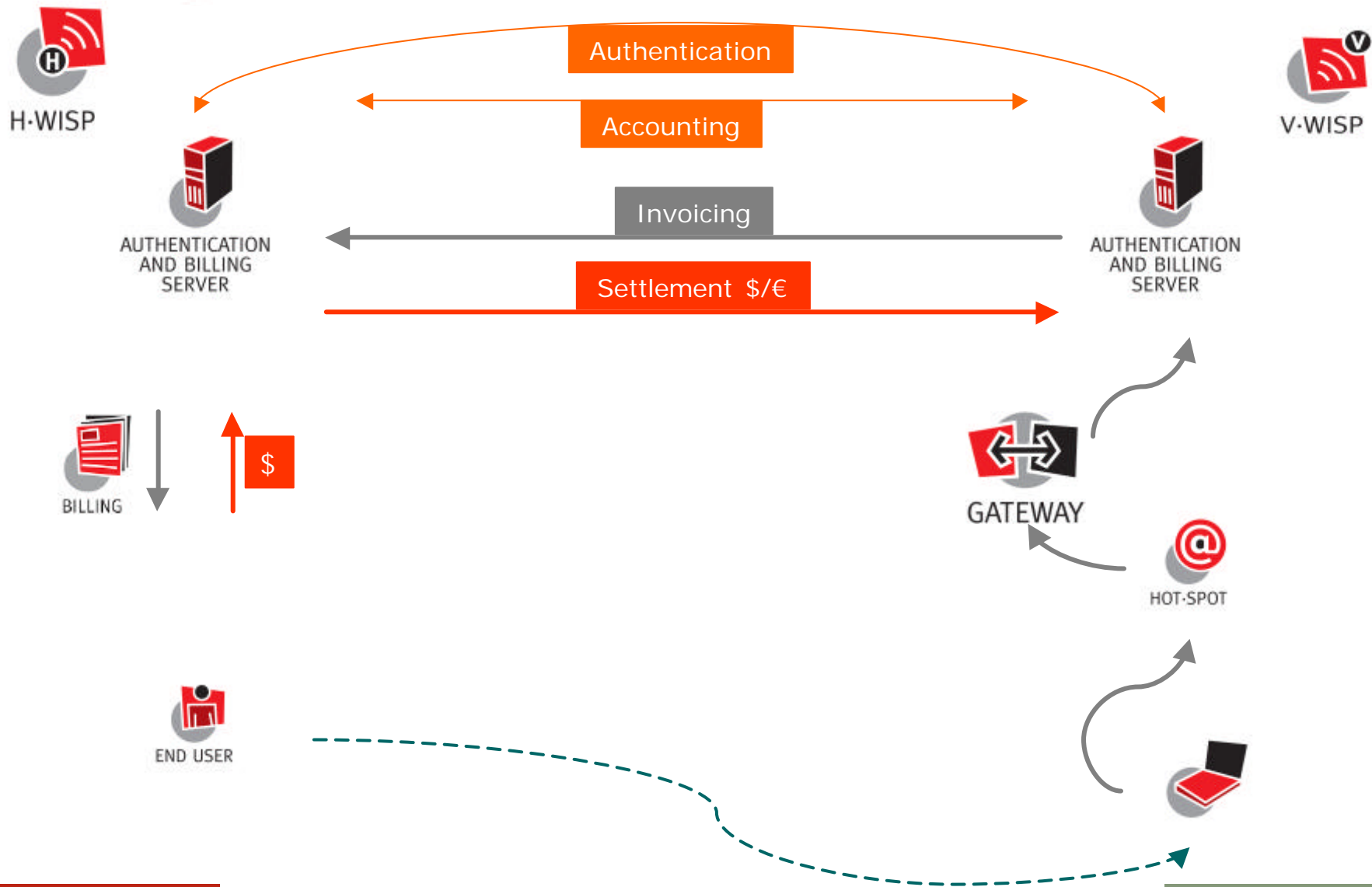
- Outbound and Inbound customers are looking for a particular value proposition – the ability to use Wi-Fi services wherever they happen to be.
- FatPort will not and cannot provide the ubiquitous coverage that these customers desire.
- Larger providers such as Wayport have a much larger footprint in regions that FatPort cannot offer service.
- The choice is clear: partner with all the other WISPs globally and offer a broader footprint or remain a small provincial player.
- The method for partnership: a global roaming framework.

What is holding us back from crossing the chasm to provide a compelling customer-focused solution?

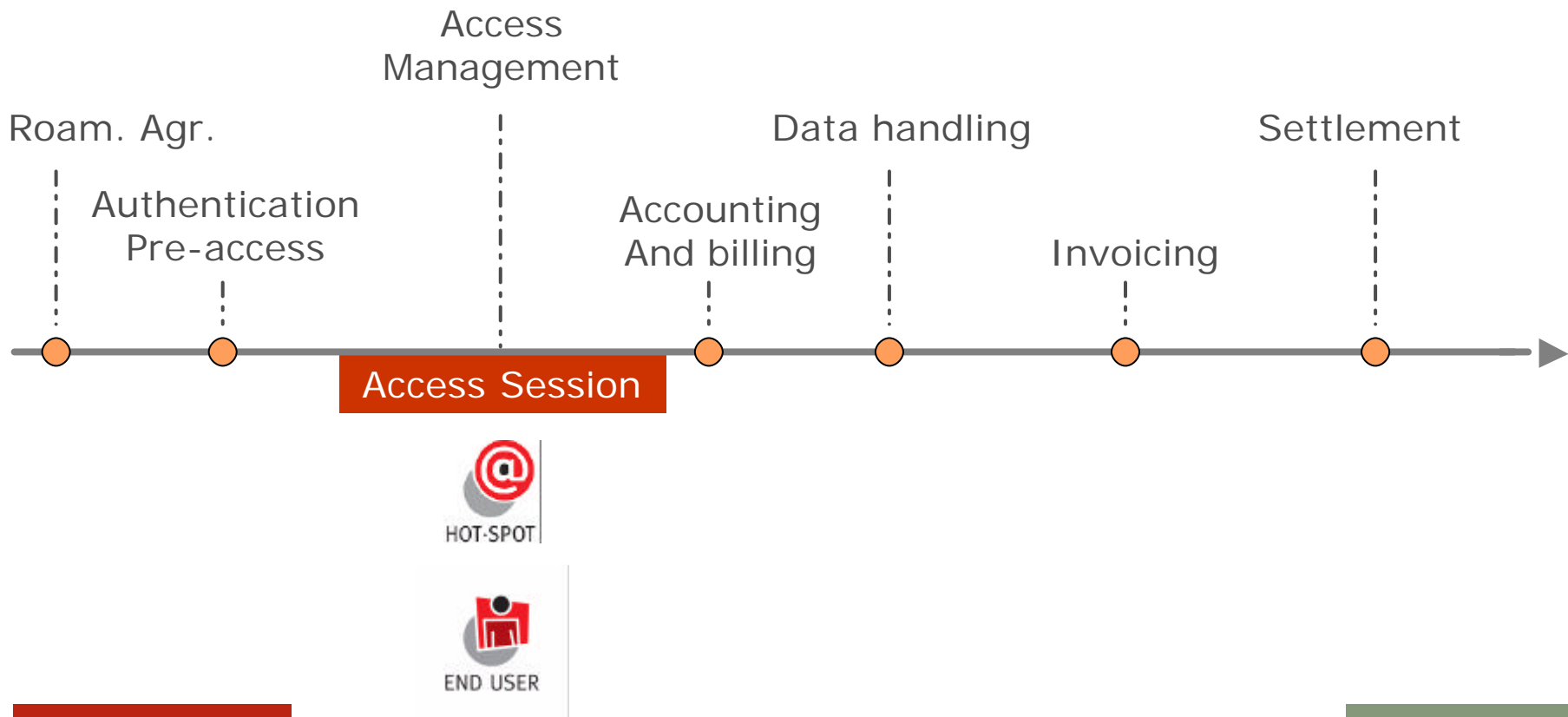
Seamless Roaming

Create a single global market.
Optimize the roaming environment.
Facilitate the existence of multiple WISPs

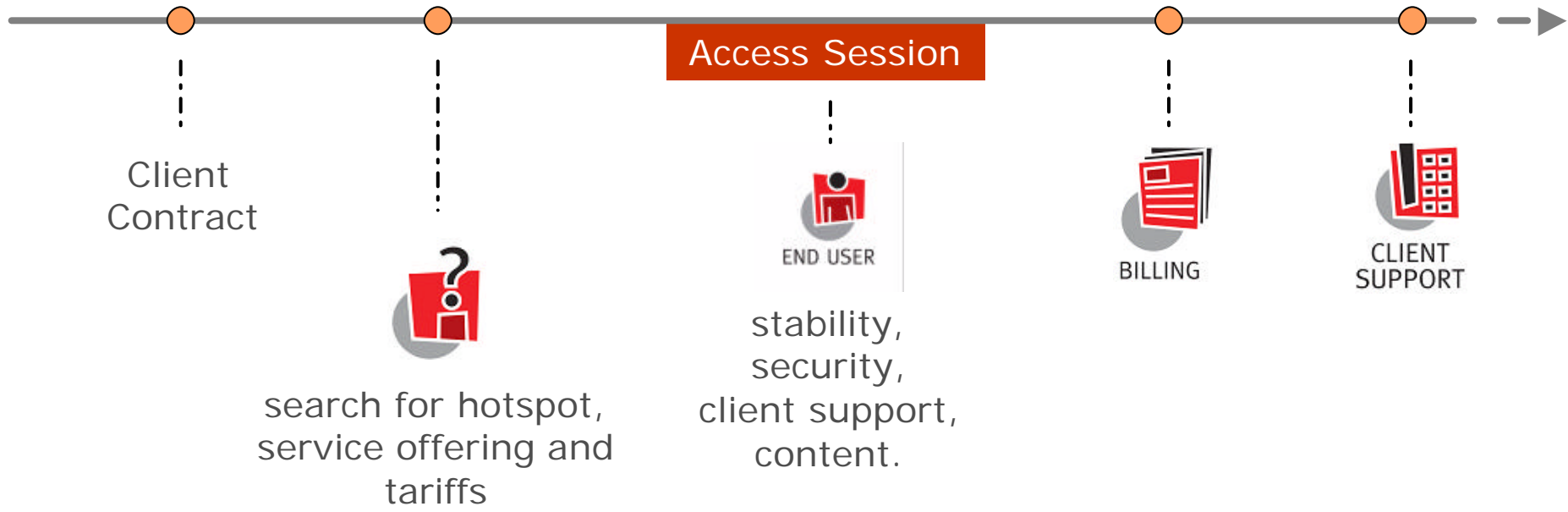
- Any standard serves 3 objectives : creating value in the WISP network, increase roaming traffic and reduce implementation costs,
- Standards are not related to any particular technology if this is detrimental to future roaming possibilities,
- Standards of Pass-One are related to the services provided by WISPs and hence aim at harmonising the user experience,
- WLAN vendors will implement certain standard specifications and will therefore be involved in the process,
- Standards are however not vendor related,
- The standardisation process follow a methodology based on priority, value generation and market needs.

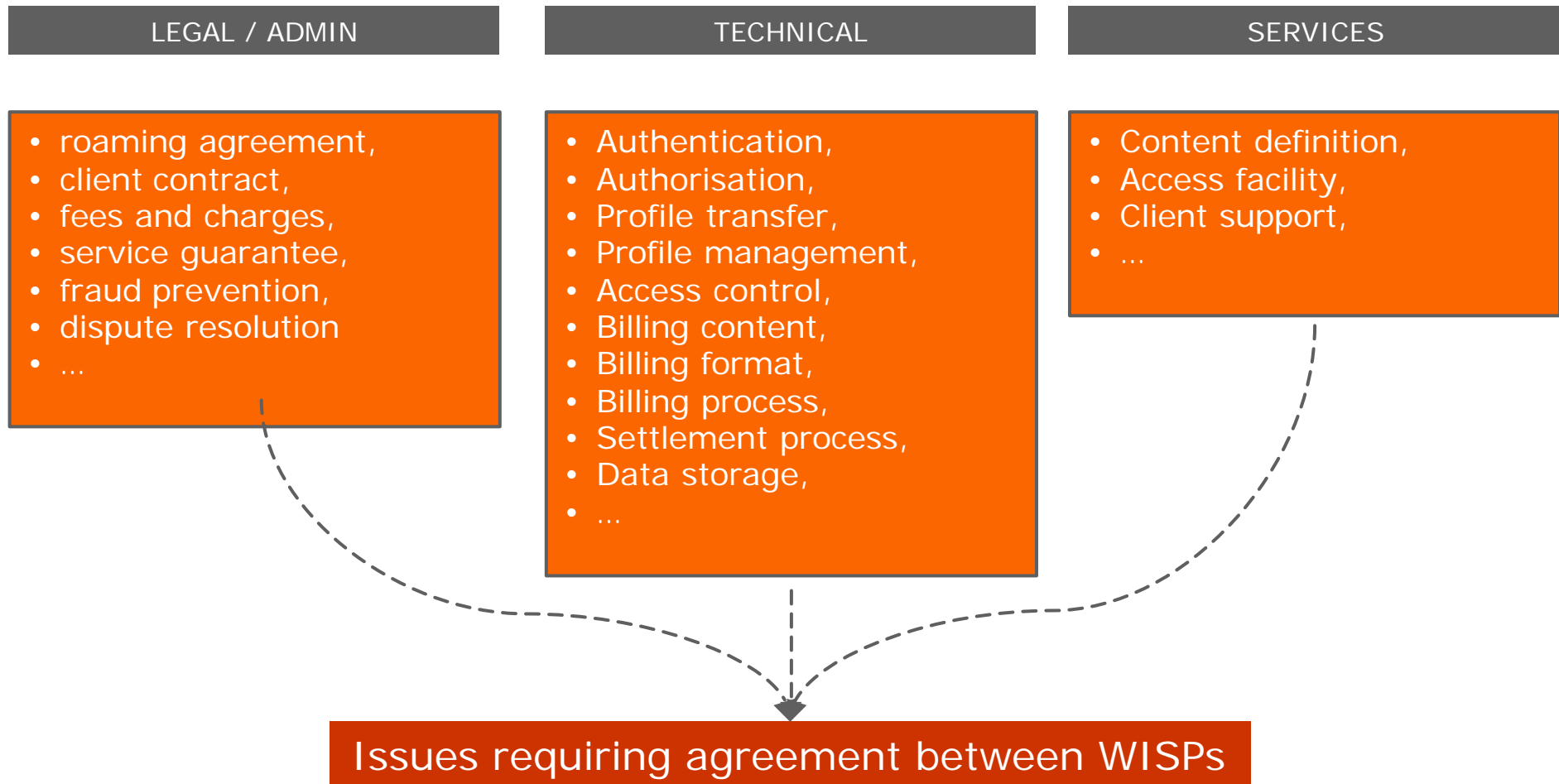


Main functionalities of roaming at WISP side

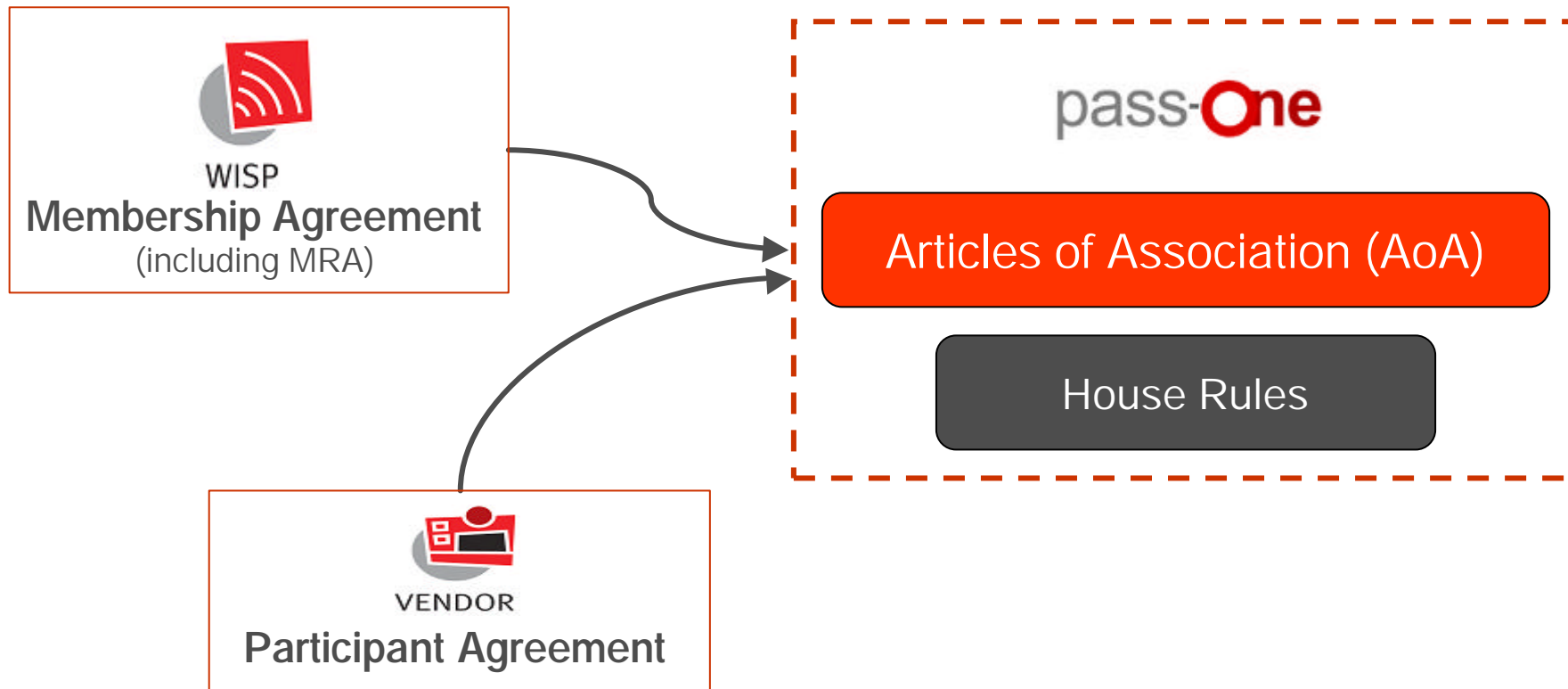


Main functionalities of roaming at end-user side

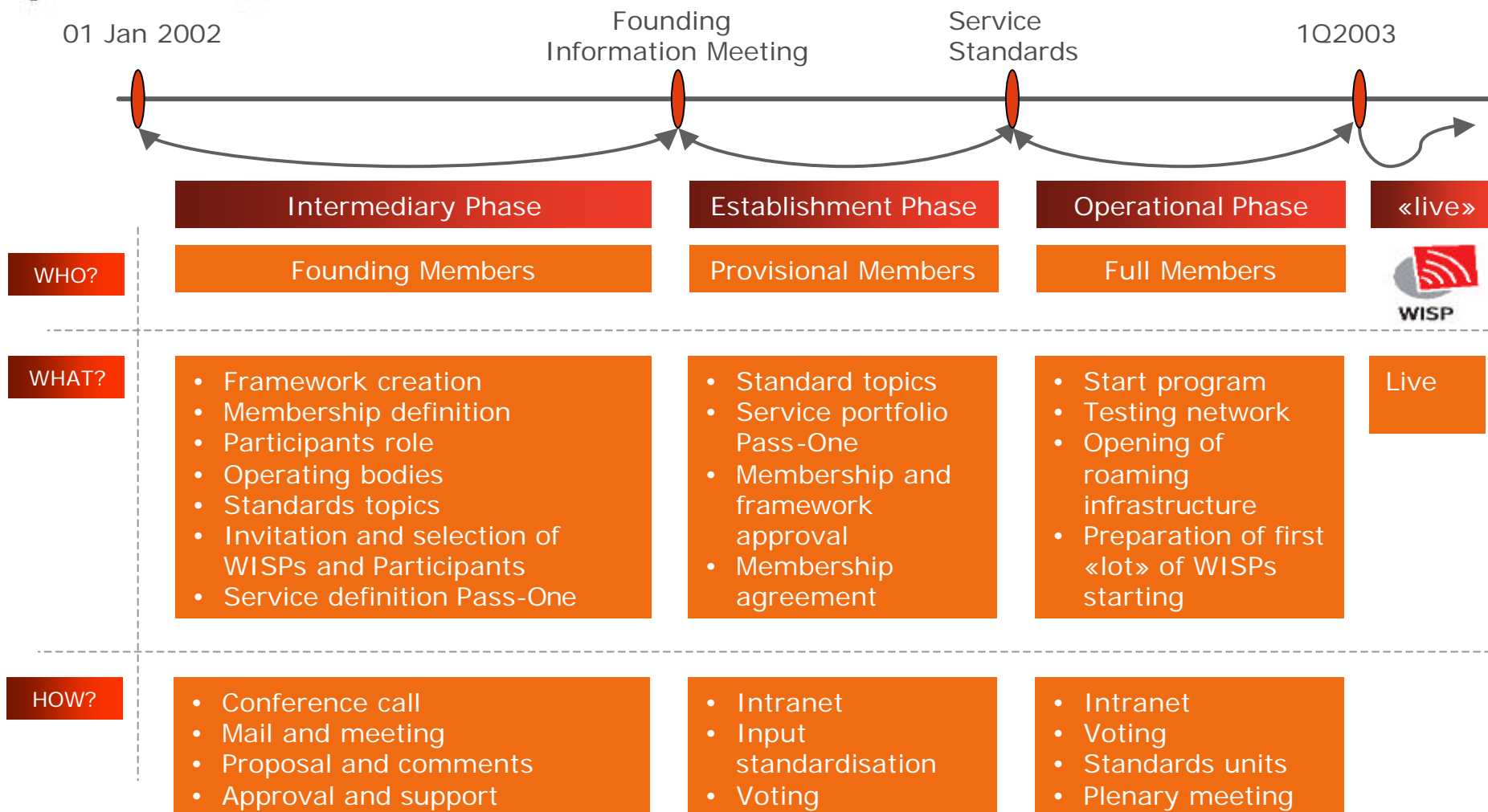




Pass-One is a non-profit mutual benefit Association under the Swiss Law



Rollout Scheme – 4 Phases



- It is important to gather all entities providing wireless broadband solutions around the table,
- It is important to stick to agreed standards for a mass market pick-up,
- Pass-One's main mission will always remain to battle against the fragmented market,
- Pass-One will embrace all types of technologies as long as the service level is harmonised

1. Start offering service on selected, profitable locations, not forgetting importance of one-off usage today, catering for subscription (e.g. T-Mobile)
2. Sign up to become member / participant on www.pass-one.com or contact the speaker/any founding member or the secretariat for further information as from today.
3. Expand your footprint or find ISP partners to expand your footprint when comfortable with the revenue model/CAPEX.
4. Mobile Operators: add practical mobile integration such as *SIM-strength* authentication (no SIM card/reader required) if really perceived necessary.

- Pass-One is a **WISP association** with a service portfolio for members and participants,
- It has a **solid legal basis** and is owned by Members,
- It has a **clear mission** and is geared up for the delivery of a global service mark,
- It's goal is to **harmonise the market** and bring the end-user a barrier-less roaming environment,
- The final result is to offer the WISPs a **viable business model**.

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Thanks!

Speaker:
Mikko Riepula, Wificom
Founding Member

www.pass-one.com
www.wificom.com
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