ITU Kaleidoscope 2016
ICTs for a Sustainable World

UNIVERSAL SERVICE, QUALITY CAPS AND NET NEUTRALITY

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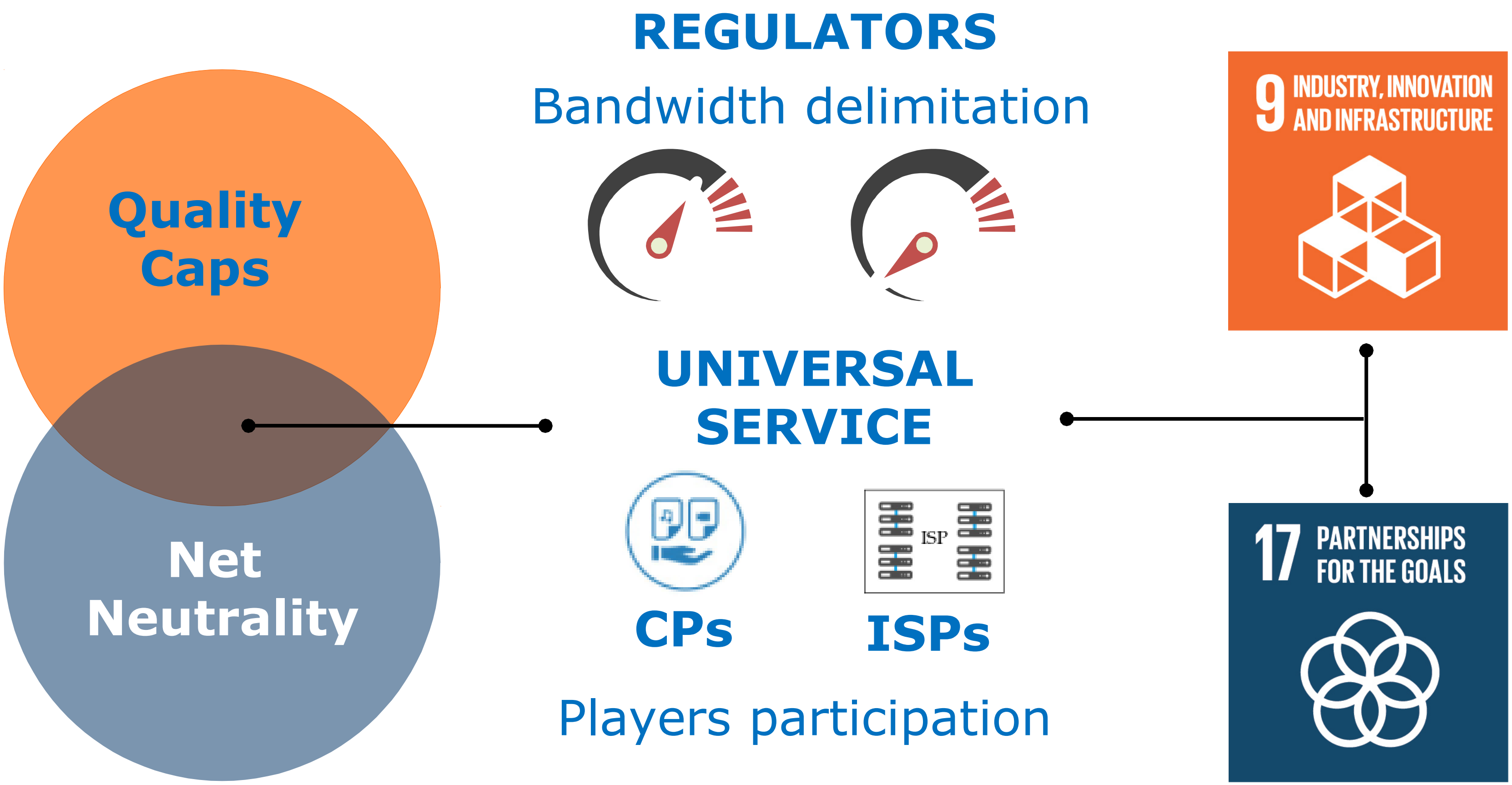
Outline

- **Motivation**
- **The proposal strategy**
  - Main question
  - Proposal : Universal Service Internet
  - The model
- **Results**
  - Regulatory considerations
- **Conclusion**

SUSTAINABLE DEVELOPMENT GOALS

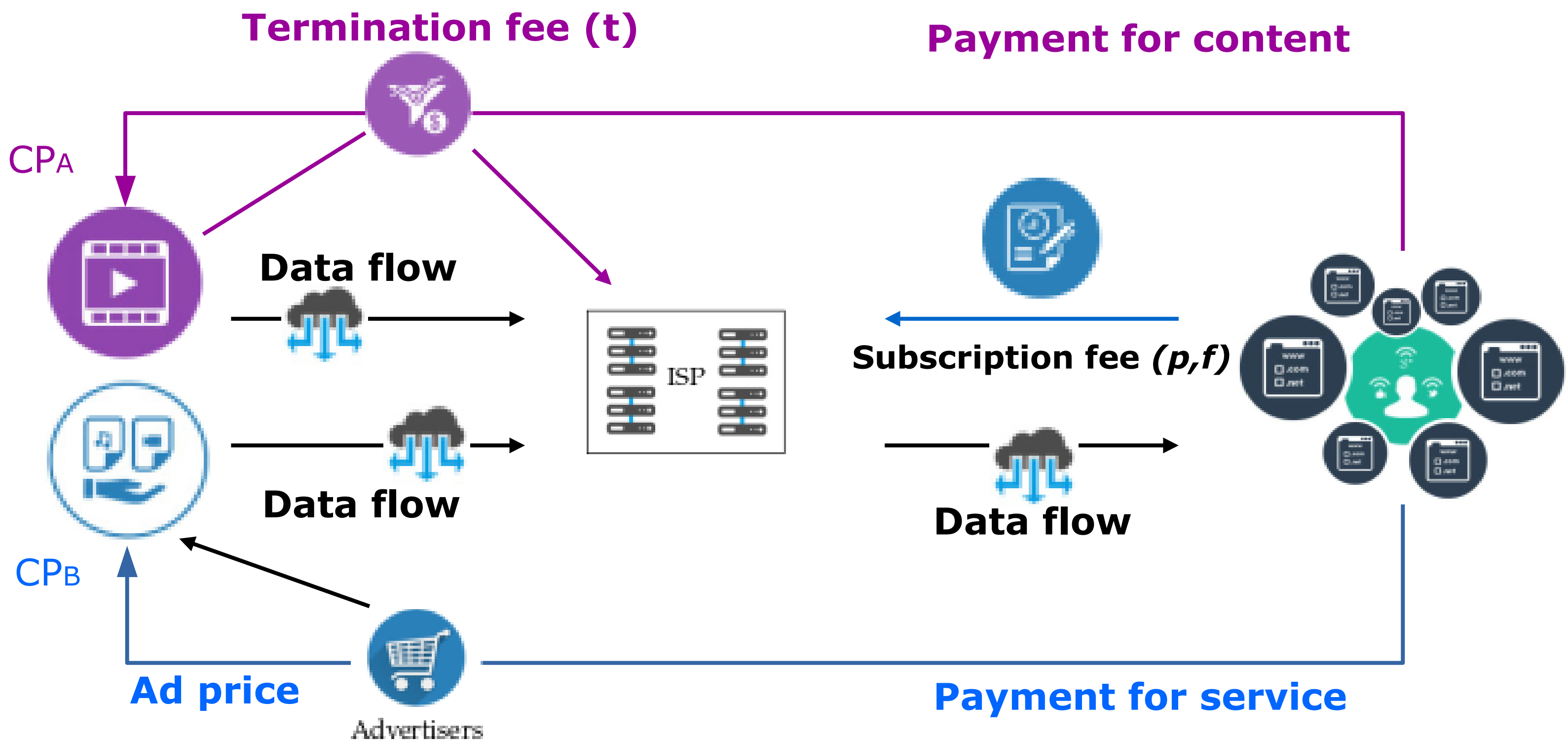
17 GOALS TO TRANSFORM OUR WORLD



Proposal strategy

Main Question

Which strategy should we adopt to include the concept of quality in terms of bandwidth as part of the Universal Service policy?



Rent shifting between ISPs and CP
Based on: Greenstein et al. (2016)

Proposal strategy

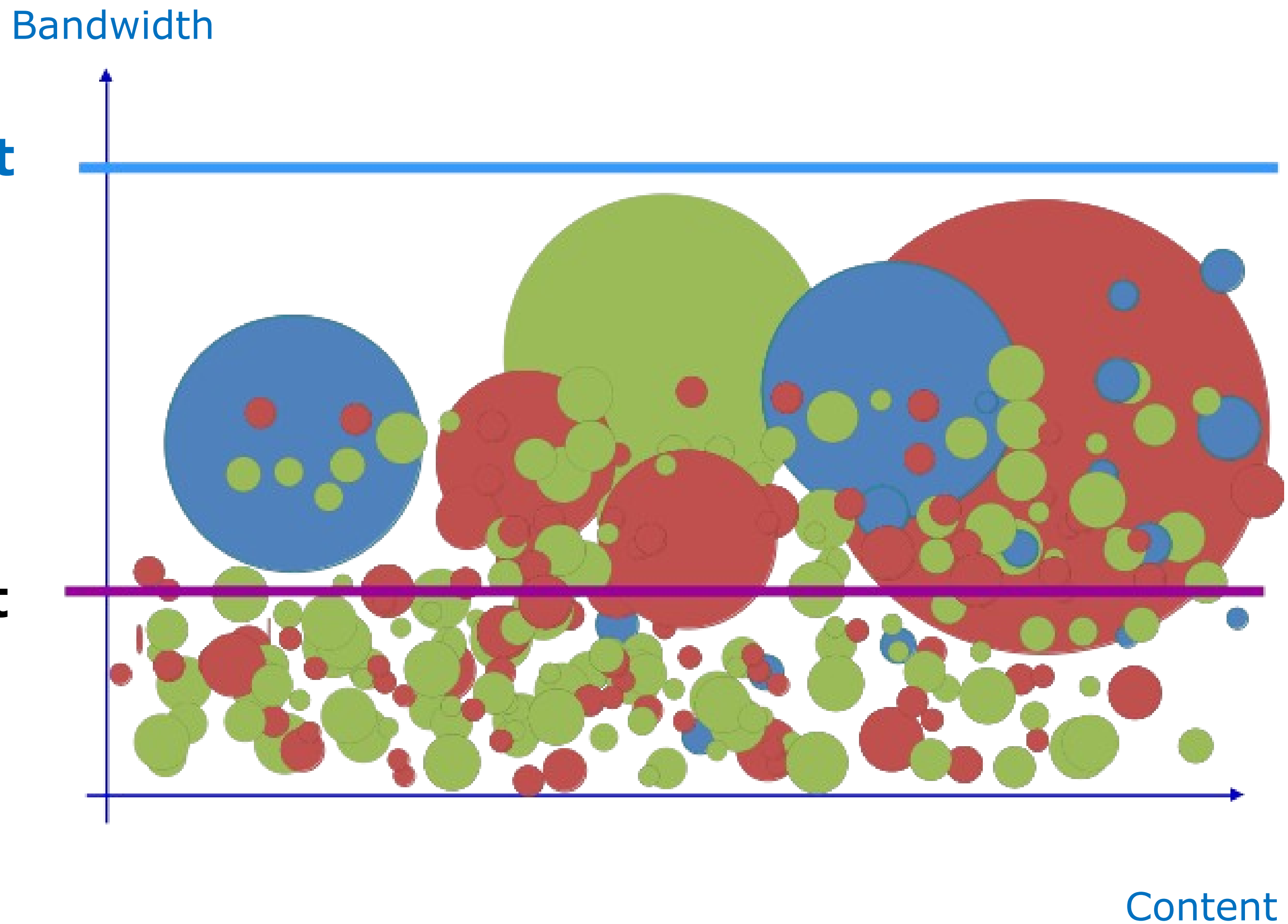
Main Question

Which strategy should we adopt to include the concept of quality in terms of bandwidth as part of the Universal Service policy?

Proposal

- Regulator proposes to ISP a Universal Service Internet;
- A limited (bandwidth) Internet service;
- Subscription price is financed by subventions or by a very small price;
- Due to the low stream bandwidth of this network, high bandwidth demand CPs have the option to be viewed via the payment of a termination fee (t) for access to the fast lane network bitstream.

Universal Service Internet proposal



Normal Internet Service

Universal Service Internet
Limited version of Internet service (bandwidth limitation)

The model

Model Approach

Industrial organization model of strategic interaction of CPs and ISPs under a zero price rate condition.

Scenarios studied

- Monopoly ISP
- Duopoly ISP
  - Symmetric ISP behavior
  - Universal service Internet in an exclusivity ISP
- Possible effects on the implementation of subscription contracts.
- In other version of this paper: established a scenario with a income disparity within the population.

Results

Regulatory considerations

- Limited Internet service price has to be calculated and fixed by regulations, taking into account:
  - ➔ Technical components of the service, not the possible loss of benefits or opportunity costs for ISP,
  - ➔ Renegotiation in Internet regulated price has to be determinated always equal or inferior to net cost of provide the service.
- Network neutrality policy has to be imposed to ISP in terms of termination fee (t) over the different CPs.
  - ➔ Contract renegotiations will be granted between ISP termination fee and CP to recalibrate market equilibrium.

Results

Regulatory considerations

- Universal service Internet in duopoly competition has a positive impact on end users' welfare:
  - ➔ Universal Internet Service could be proposed as an open regulated policy with defined specifications for any ISPs.
  - ➔ The long-run marginal cost define the price of termination fee, in a perfect competition scenario $t \approx 0$.
  - ➔ If this policy is to be proposed by the regulation authority, it has to be considered in a competition market structure.

Conclusions

- There is a positive effect to propose a Universal Service Internet in terms of access due to the reduction of subscription price.
- The expansion of this policy provides benefits in terms of participation of indirect financing of universal service.
- Defining a limited Internet service as a policy to increase Internet penetration, the benefits merit less concern about the competitive effects, specially in regions where a large income difference between their population is present.

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Thank you for your attention!!

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