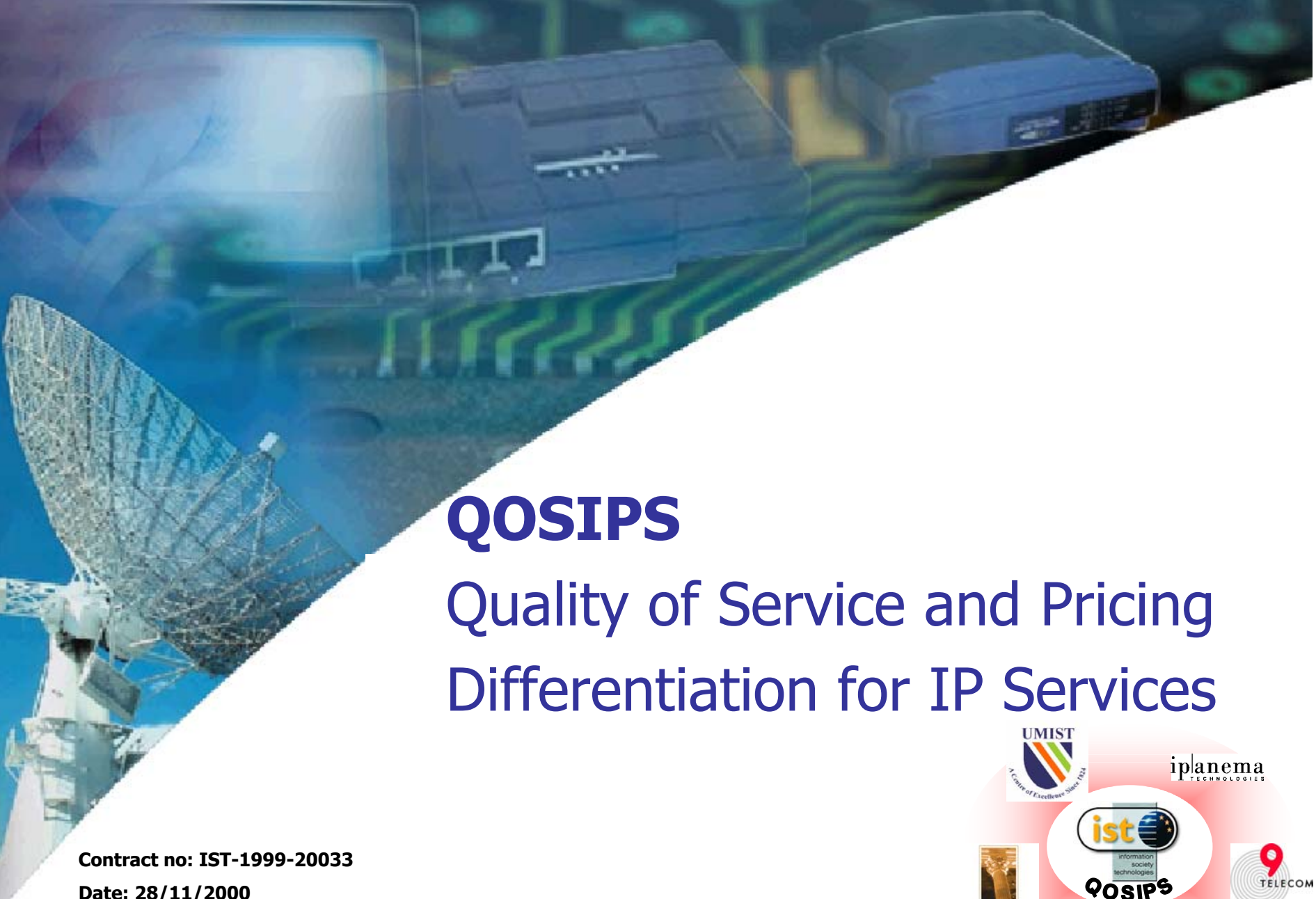


QOSIPS

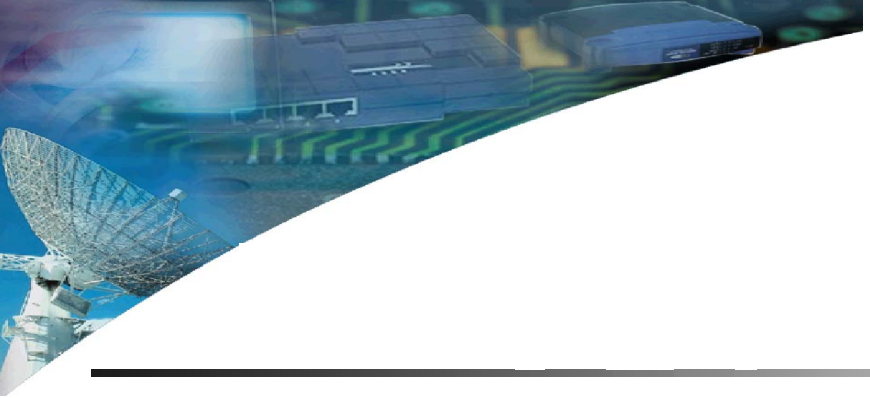
Quality of Service and Pricing Differentiation for IP Services

Contract no: IST-1999-20033

Date: 28/11/2000
Deliverable: D6.1.1
Title: Project presentation

Content

- Objectives of the QOSIPS Project
- Consortium
- Quality Module
- Pricing Module

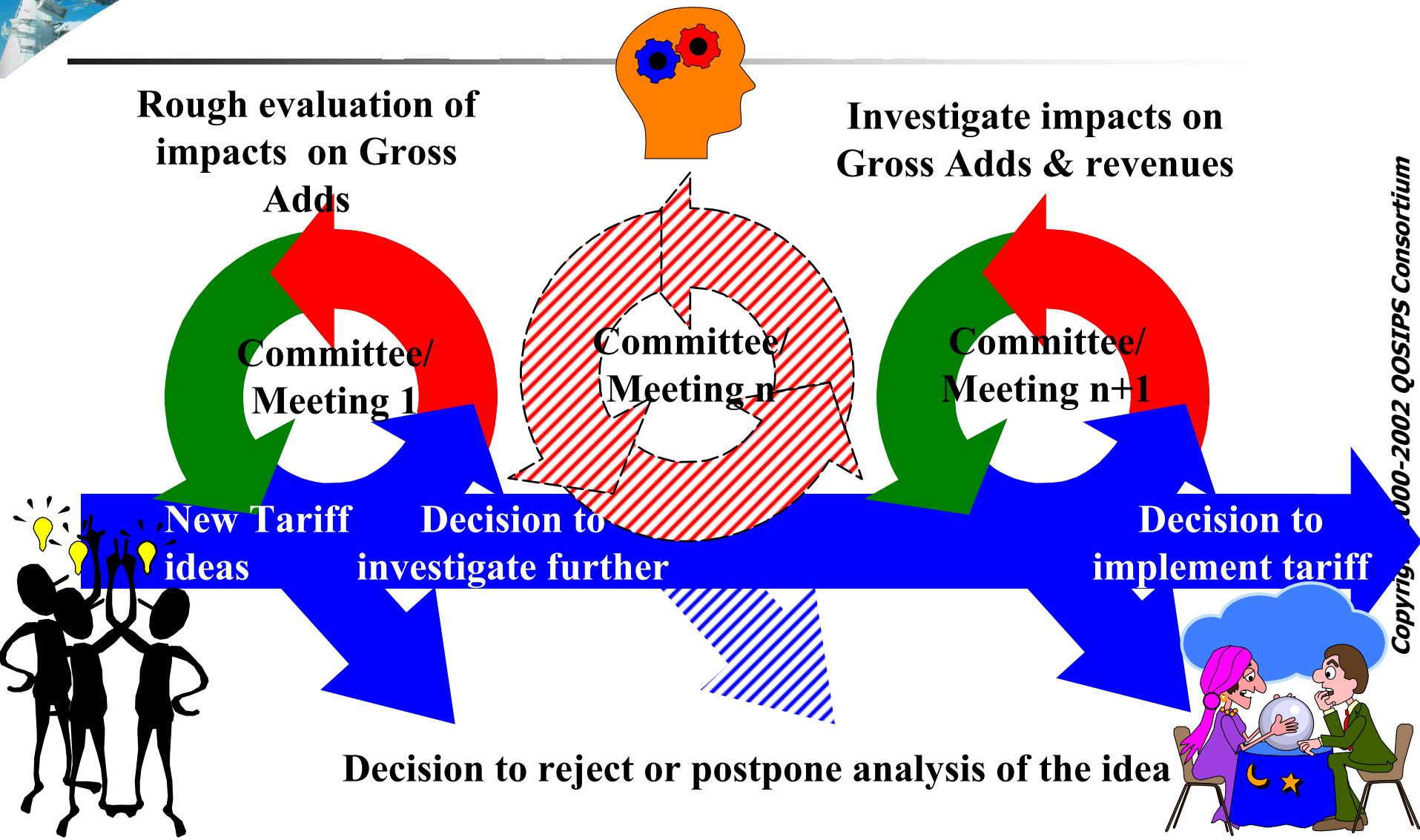


- Objectives of the QOSIPS Project
- Consortium
- Quality Module
- Pricing Module

Objectives of the QOSIPS Project

- Develop innovative technologies for supporting
  - Quality of Service (QoS) management,
  - Service differentiation &
  - Price setting of Internet Protocol Network Service Providers.

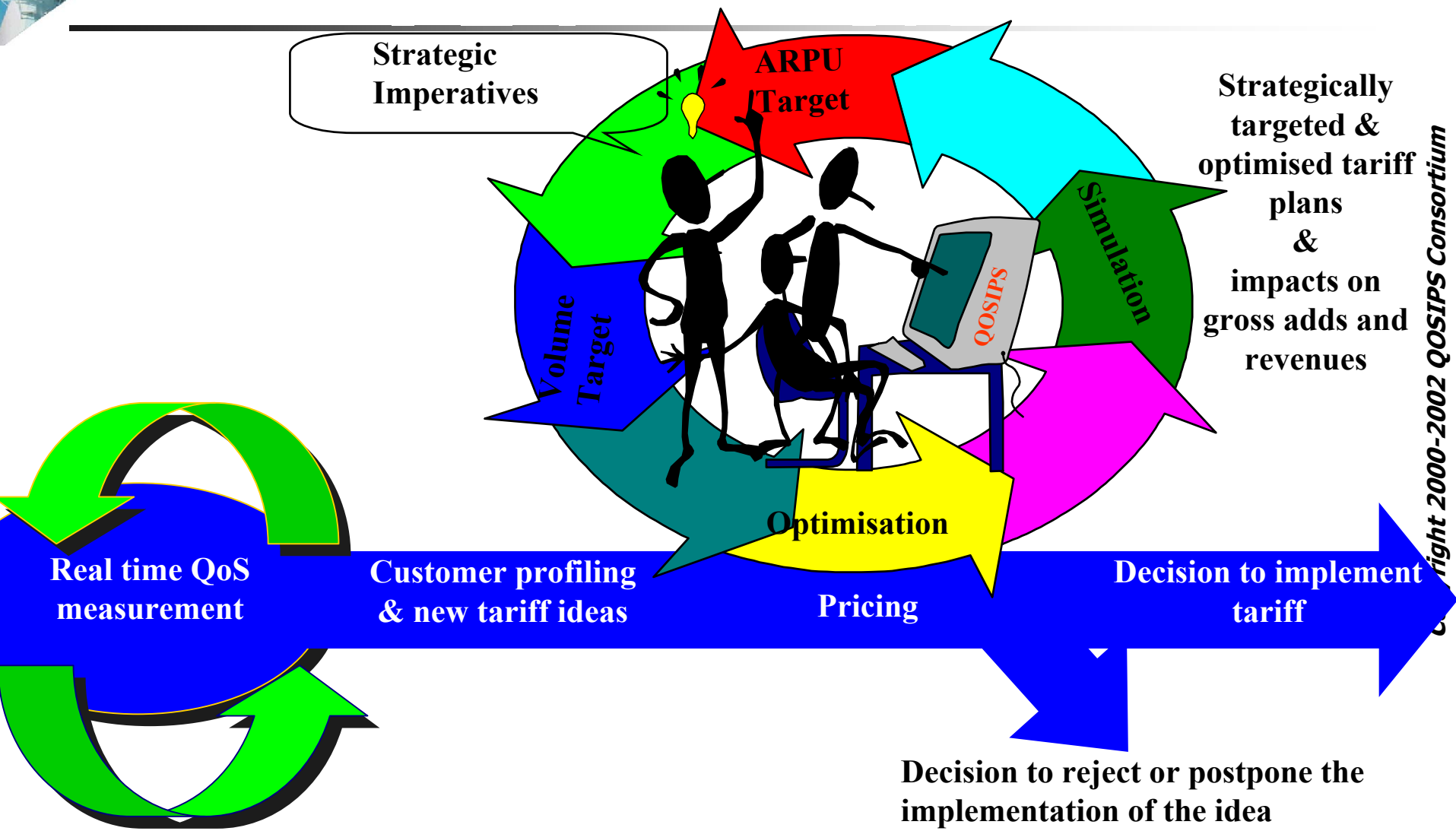
Non Supported Iterative Process



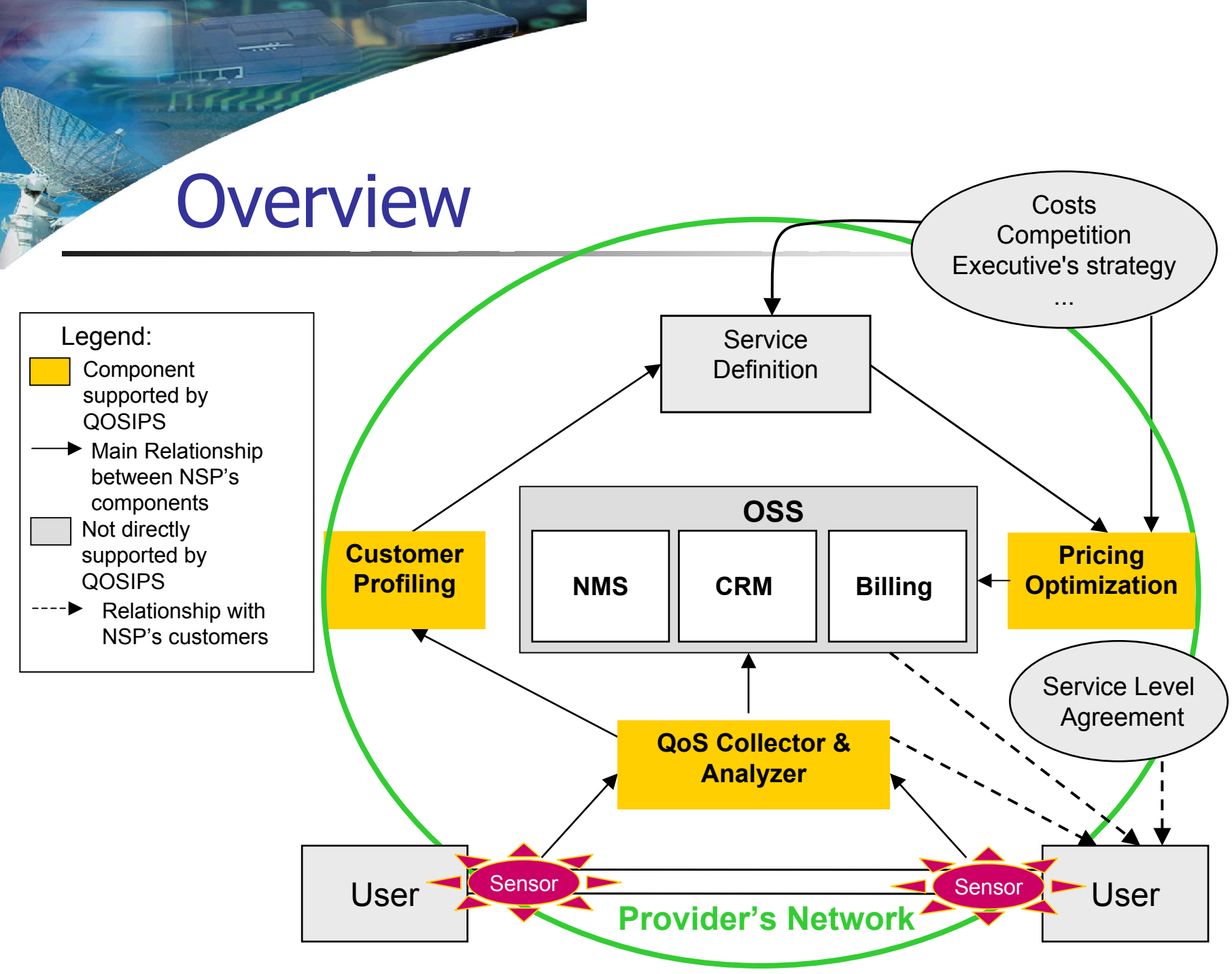
Functions of the QOSIPS System

- Provide exhaustive, non-intrusive & accurate measurement of real-time QoS of user's traffic packets without injection of test packets in the network.
- Support customer's profiling (through classification of customer "real" traffic & use of QoS oriented services) as an innovative way of generating service differentiation.
- Support the pricing of QoS oriented services such as QoS oriented Service Level Agreement, per application or/and per destination prioritisation, pay-per-use, pay-per-class of service, or global prices packaged per customer type, etc.

Interactive Iterative Process using QOSIPS



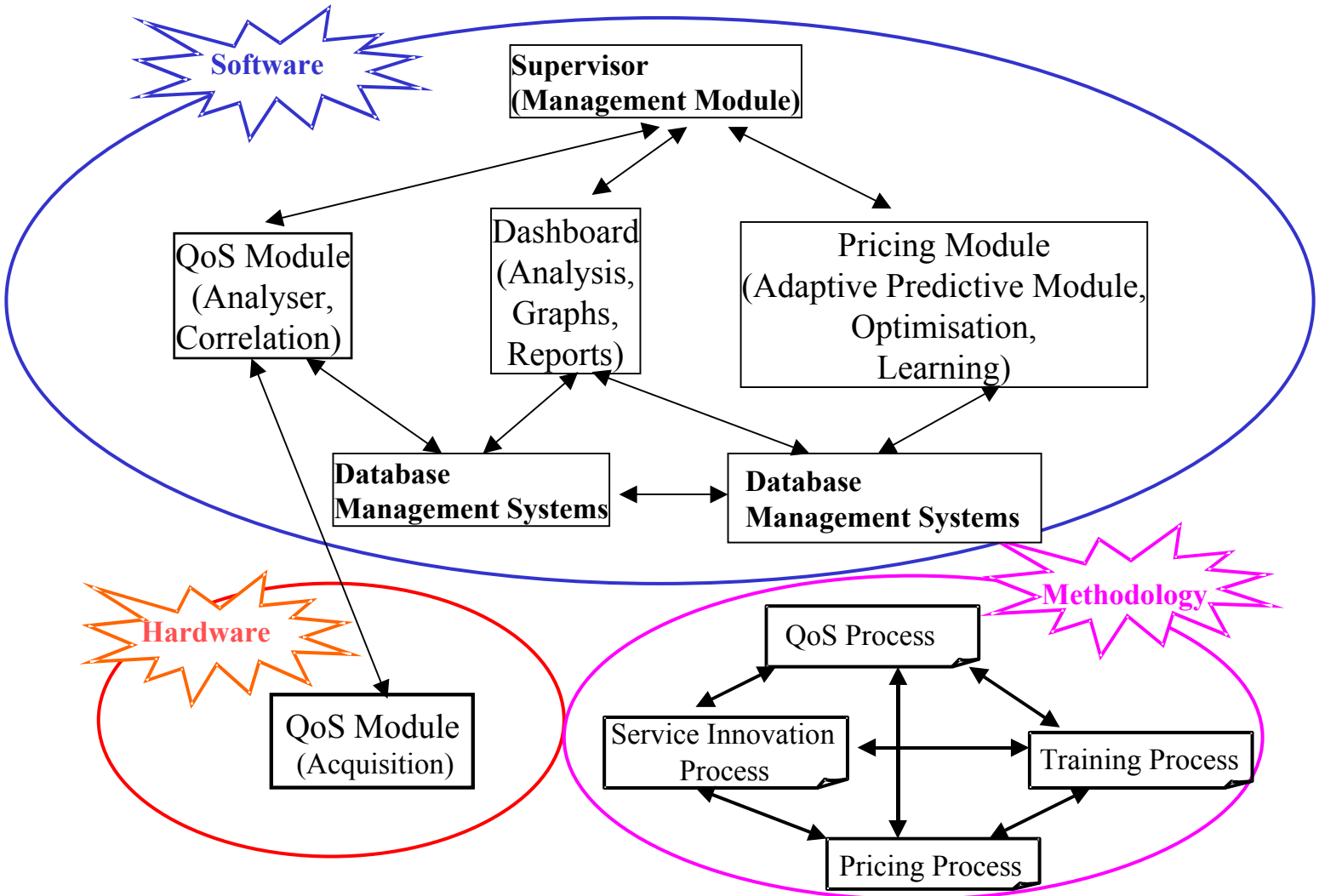
Overview

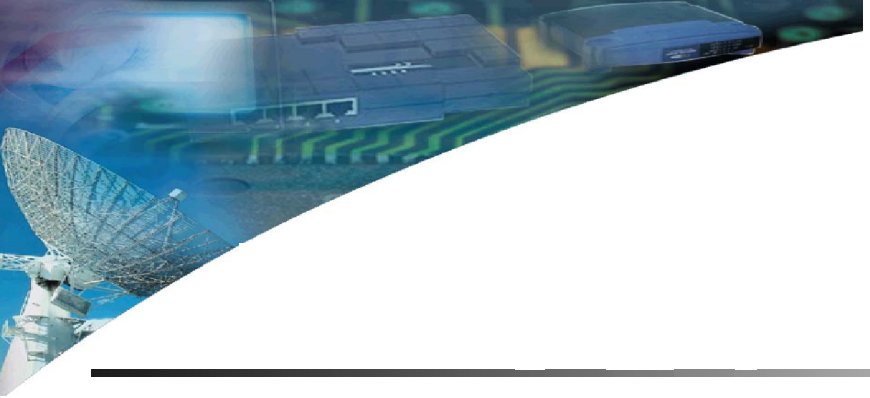


Main Modules

- The Quality Module
  - To support measurement and customer profiling
- The Pricing Module
  - To optimise the NSP's SLA with respect to existing and new innovative services.
- Interfaces to standard network management systems and billing system will be proposed.

QOSIPS' Functions & Methodology





- Objectives of the QOSIPS Project
- Consortium
- Quality Module
- Pricing Module

Participants

- Co-ordinator:
  - University of Manchester Institute of Science and Technology (UMIST-UK)
- Partners:
  - Knowledge Support Systems (KSS- UK)
  - Ipanema Technologies (Ipanema- France)
  - Politechnika Warszawska (WUT- Poland)
  - 9 Telecom (9 Telecom - France)

UMIST

- Project Co-ordinator
- UK Leading technological university.
- Has participated to a number of European funded project
- The research group participating to the QOSIPS project specialises in intelligent decision support technologies.
- UMIST particularly looks into the extraction and representation of business expertise and develop the Dashboard

KSS

- Software House developing Intelligent Pricing Decision Support Systems for
  - Petrol, convenience & Mass Retailing
  - Mobile Telephony
  - Retail Banking
- Listed on the London Stock Exchange and techMARK 100.
- The Pricing module's technology is a direct extension of the work of KSS on intelligent pricing decision support software for competitive market as adapted to the IP networking pricing problem.

Ipanema

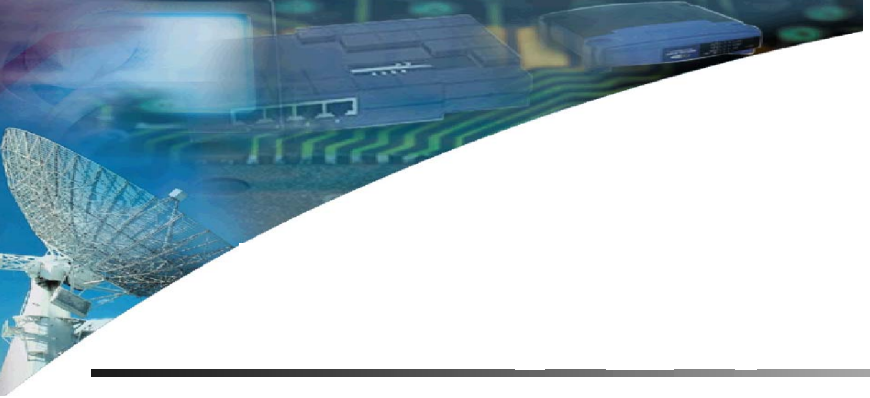
- Fast growing high technology company working on IP networks real-time measurement and optimisation.
- The Quality module and hardware's technologies are a direct extension of the work of this company on network technologies as adapted to the IP networking context.
- Along with partner KSS, IPANEMA implement the QOSIPS system.

9 Telecom

- Innovative IP Network Service Provider.
- Its role is mainly to provide the “field of experimentation”.
- 9 TELECOM is providing user feedback all along the project and is using the QOSIPS system on a day to day basis, on small-scale real life cases.

WUT

- Leading technological university that specialises in heuristic and optimisation of multi-parameters problems.
- WUT along with UMIST provides the research inputs necessary to develop the Pricing Module of the QOSIPS system.
- WUT particularly looks into the optimisation algorithms of the Pricing Module.
- WUT is also responsible for the dissemination activities.



- Objectives of the QOSIPS Project
- Consortium
- Quality Module
- Pricing Module

Quality Module

Real-time Measure of all real-time QoS parameters

- Real metrics (one-way delay, jitter, loss)
- Accurate, exhaustive, non intrusive measure
- Multiple views: network and users global VPN, not only local access points

System Architecture Benefits

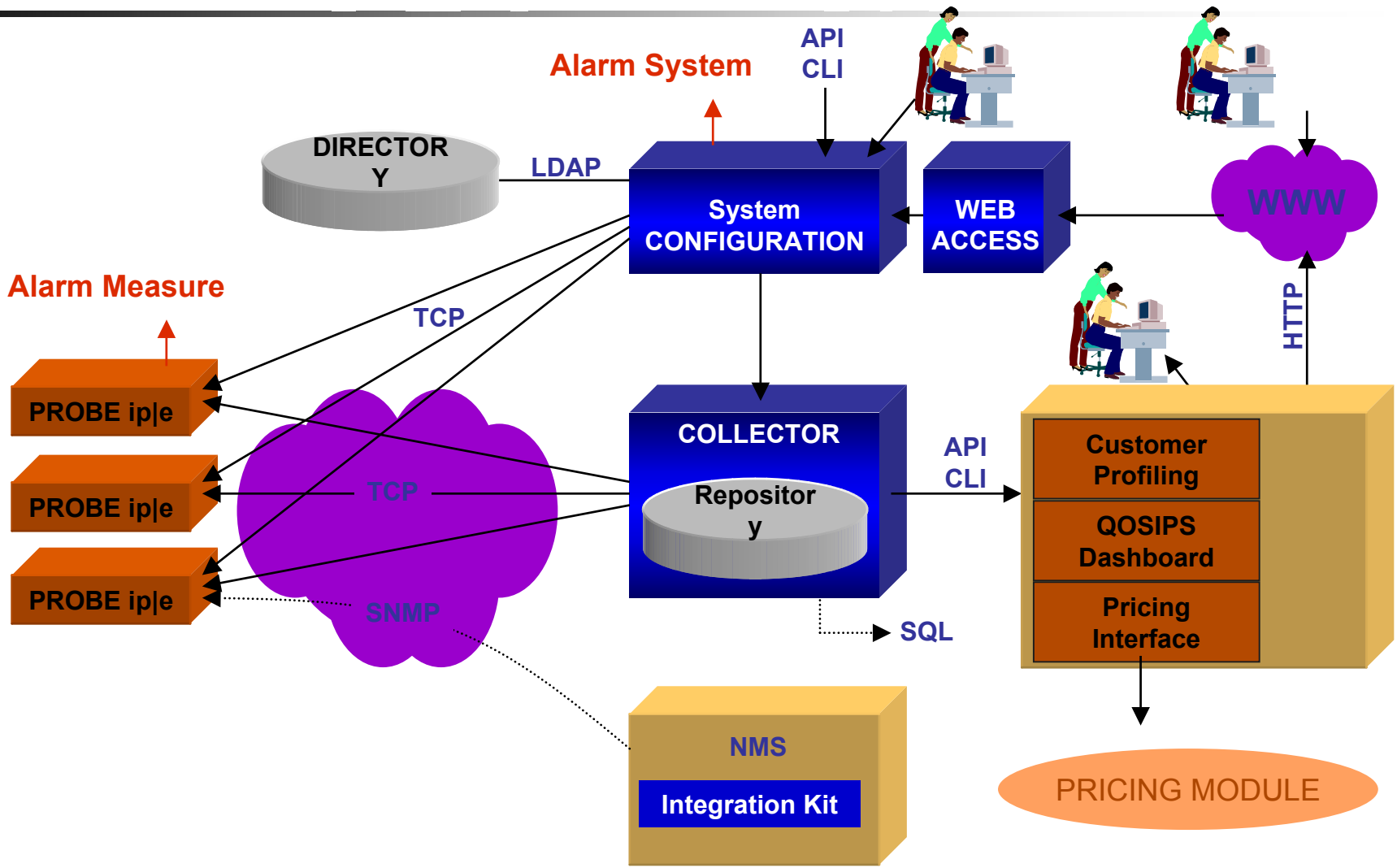
Highly scalable system

- in number of VPN access points and in VPN access speed
- very small data flows from Ipanema's probes to central manager
- High level analysis and reporting executed centrally

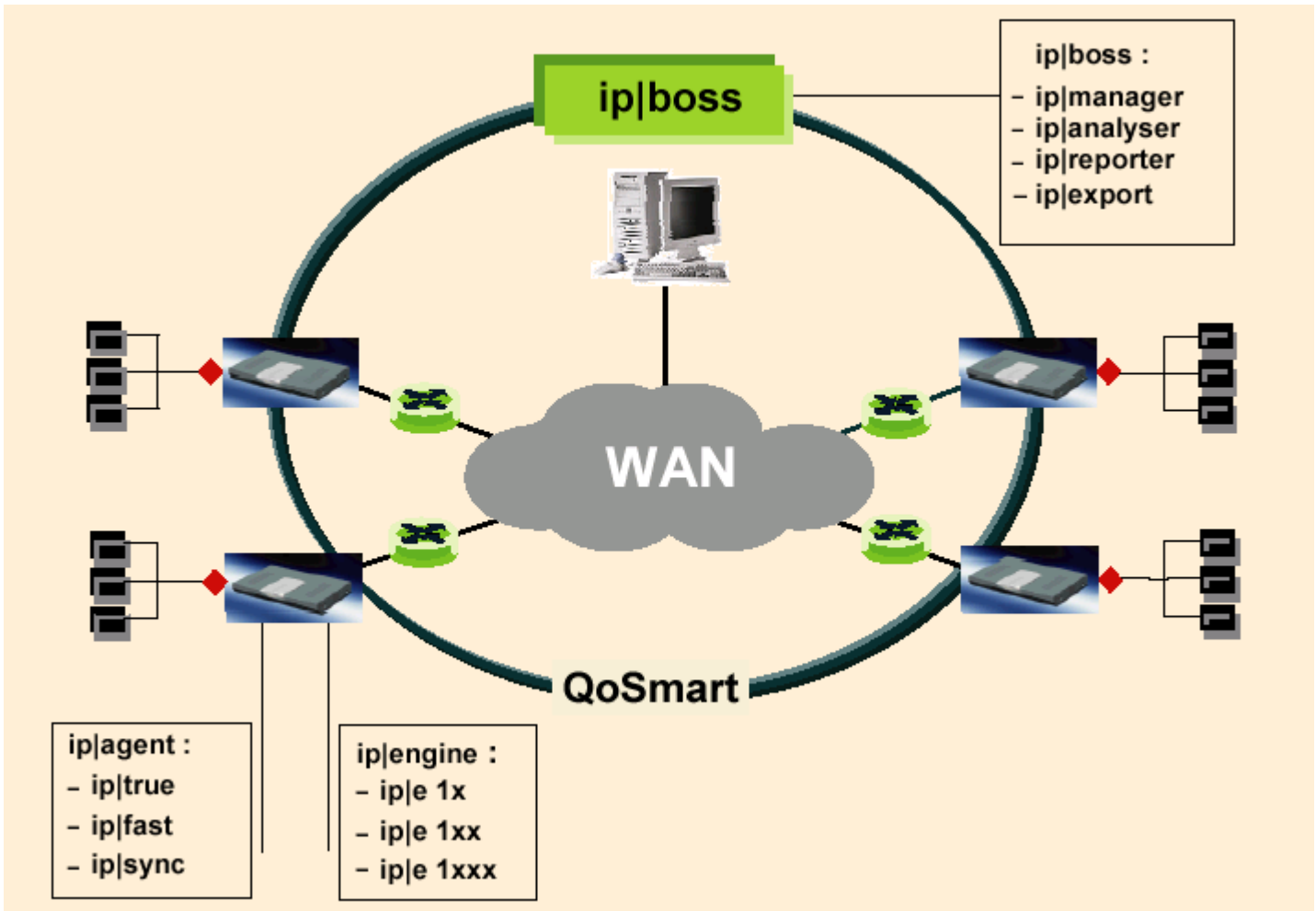
Does not depend on network architecture

- Level 3 (IP) metrics
- Analysis up to application level for classification
- allows heterogeneous transit network technology
  - *Diffserv, MPLS, even Best Effort*

Impact of the Quality Module



Real-time measurement of QoS



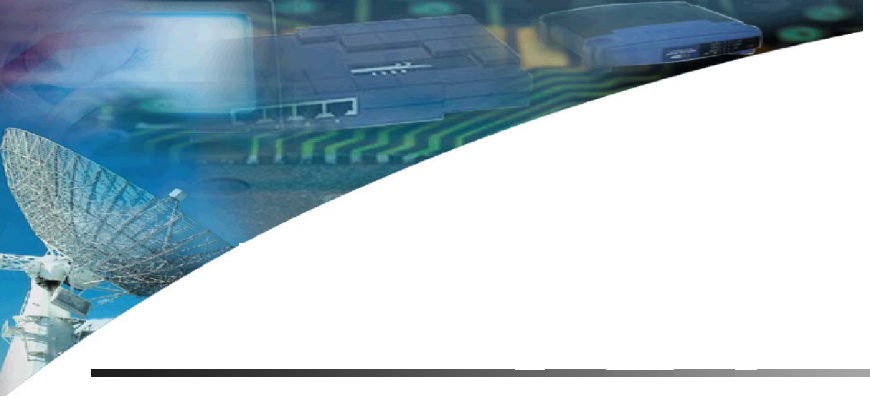
Strong Economic Impact

Measure benefits both enterprises and operators:

- investment and budget control
- Service Level Agreement (SLA) negotiation and control
- smooth real-time services (VoIP…) introduction

A competitive weapon for operators to:

- improve VPN service offer
- optimize tariffs
- gain market share and retain customer base

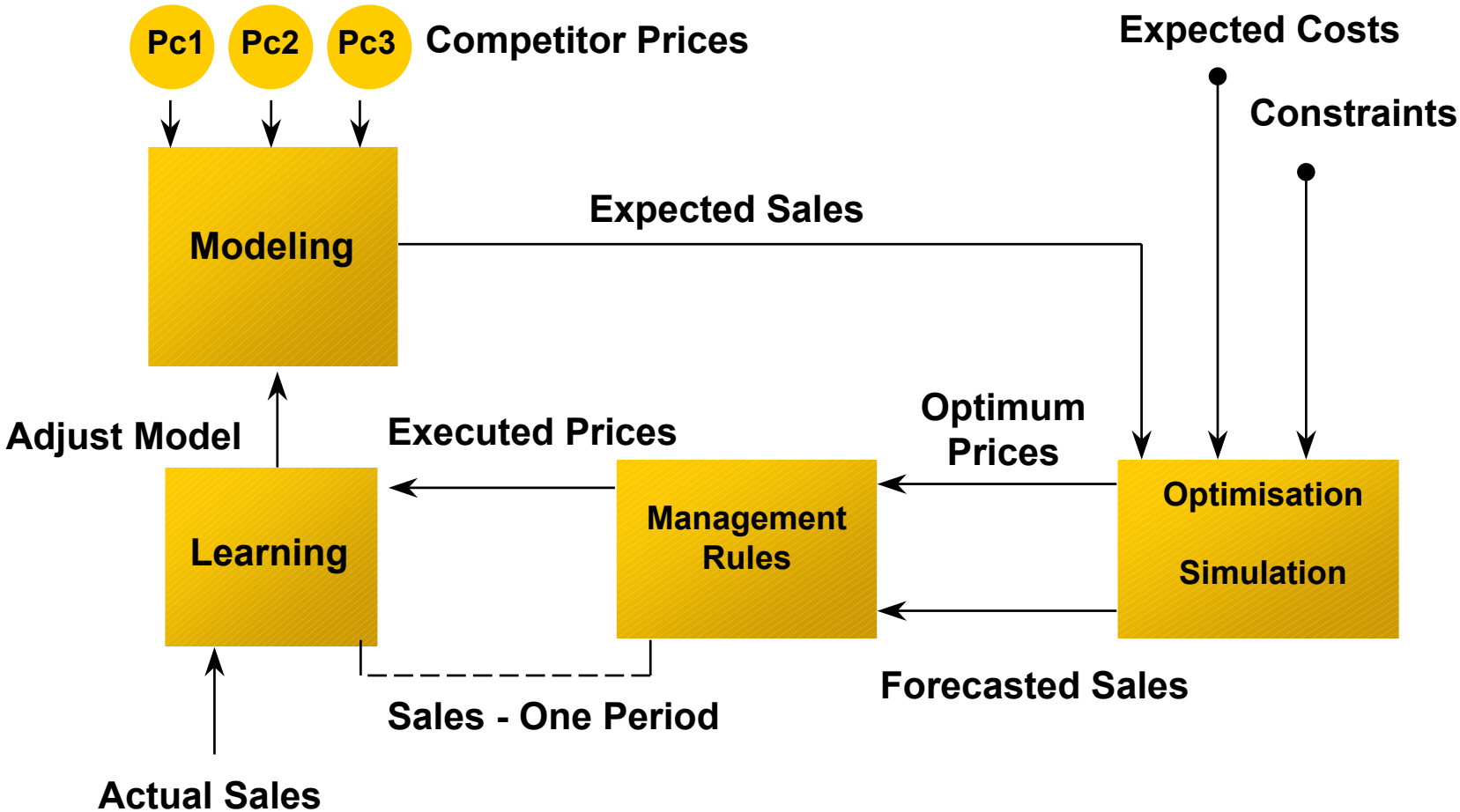


- Objectives of the QOSIPS Project
- Consortium
- Quality Module
- Pricing Module

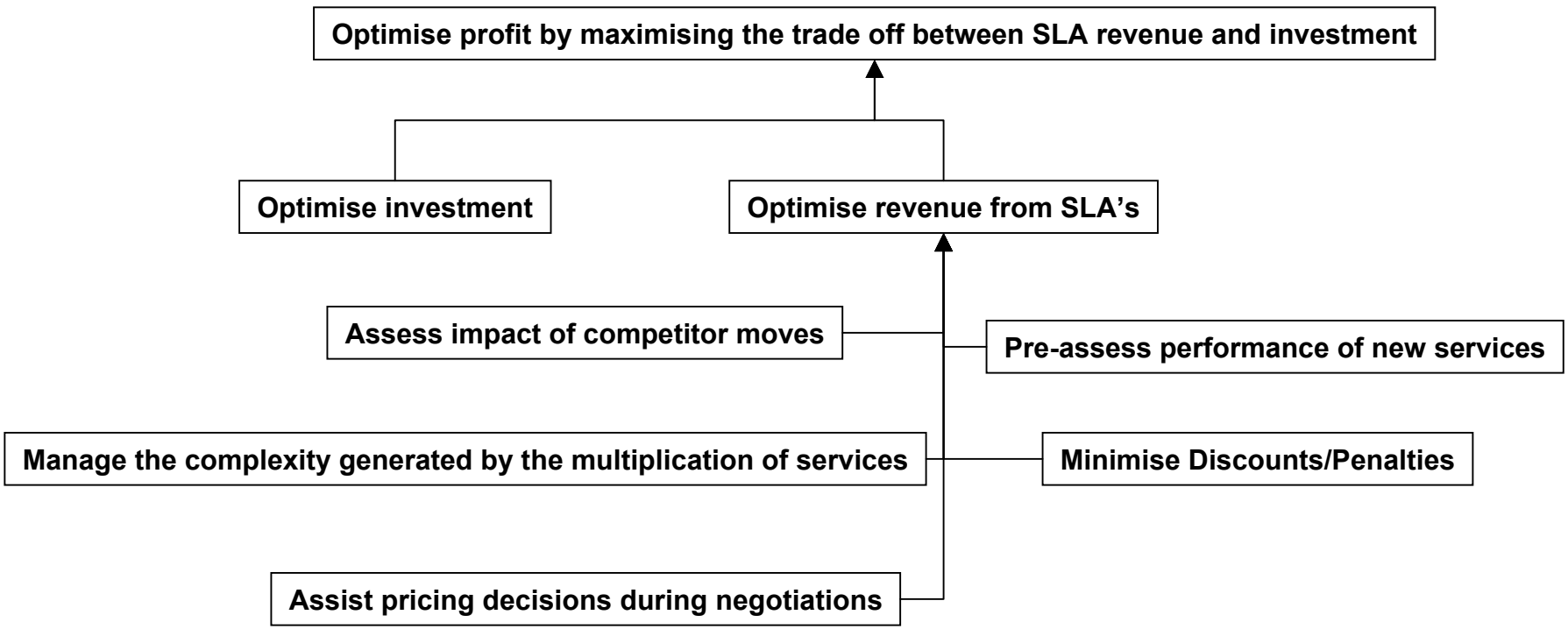
Pricing Module

- Constructing Demand models describing the NSP's pricing problem.
- Optimising the NSP's portfolio of S.L.A. with respect to:
  - Q.o.S.and Differentiated services
  - Customer segmentation
  - Competitor offering
  - Strategic constraints such as image, market share, price positioning
- Computes sales, revenue & profit forecasts

Pricing Architecture



Pricing Goals



Strong Economic Impact

A competitive weapon for operators to:

- Control investment (avoid network over-engineering)
- Optimise profit (optimising SLA/tariff in line with customers' usage profiles and classes of services)
- Increase market share (provide USP in comparison to other competitor IP Network operators)

Contacts

http://www.qosips.com **http://www.qosips.org**

KSS

Head Office
St James Buildings,
7th Floor
79 Oxford Street
Manchester
M1 6SS
United Kingdom

Tel: 44 (0) 161 609 4040
Fax : 44 (0) 161 236 6305

www.kssg.com

US office
KSS Inc
25 –A Hanover Road
Florham Park
NJ 07932
United States

Tel: + 1 (973) 549 1850
Fax: +1 (973) 549 1860

ipanema TECHNOLOGIES

Head Office
28, rue de la Redoute
92260 Fontenay aux Roses
France

Tel: + 33 1 5552 1500
Fax: + 33 1 5552 1501

www. ipanematech.com
info@ipanematech.com