



FÖLDGÁZZSZÁLLÍTÓ

A MOL-CSOPORT TAGJA

Introduction of the Regional Booking Platform

Launch of RBP Pilot Project



Network User Info Day
Siófok, 28 October 2014
Medias, 30 October 2014

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FGSZ Ltd.

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Legjobb Munkahely
Világgazdaság – Aon Hewitt 2011

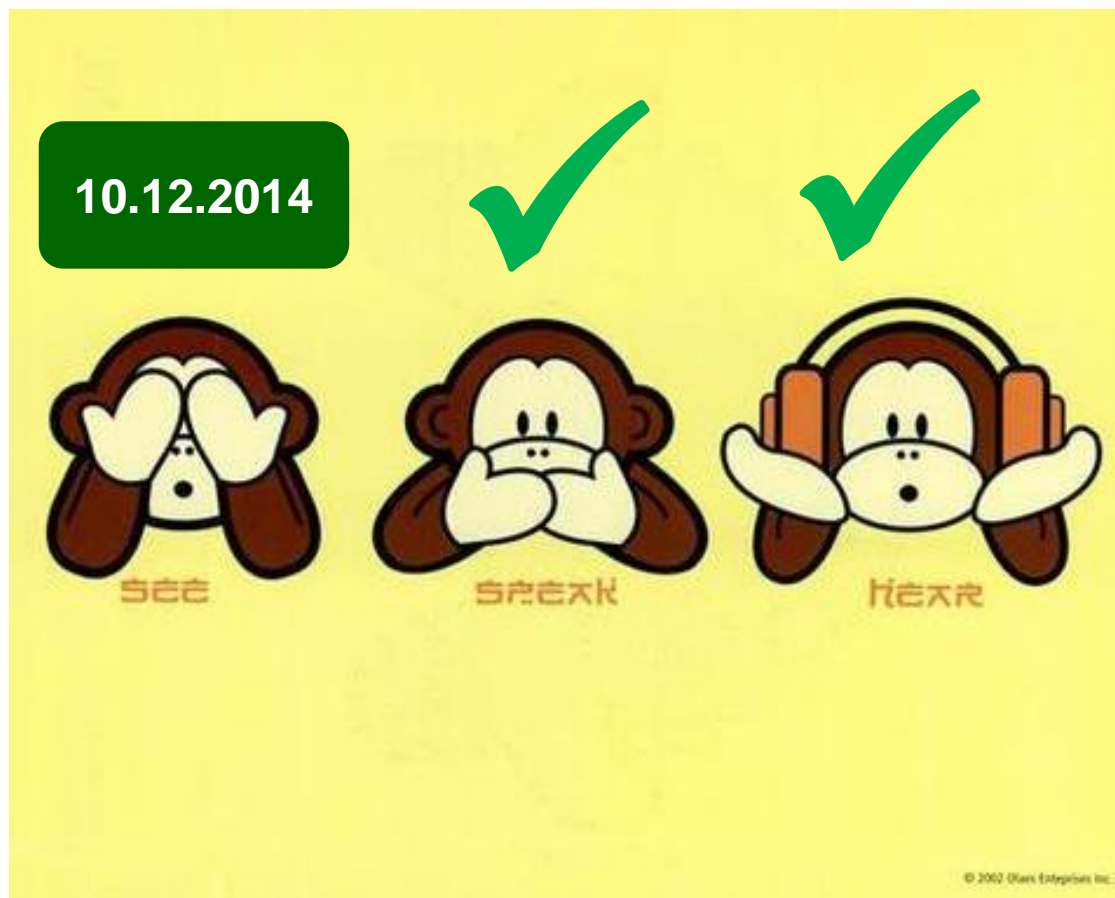


Legjobb Munkahely
Világgazdaság – Hewitt Felmérés 2010

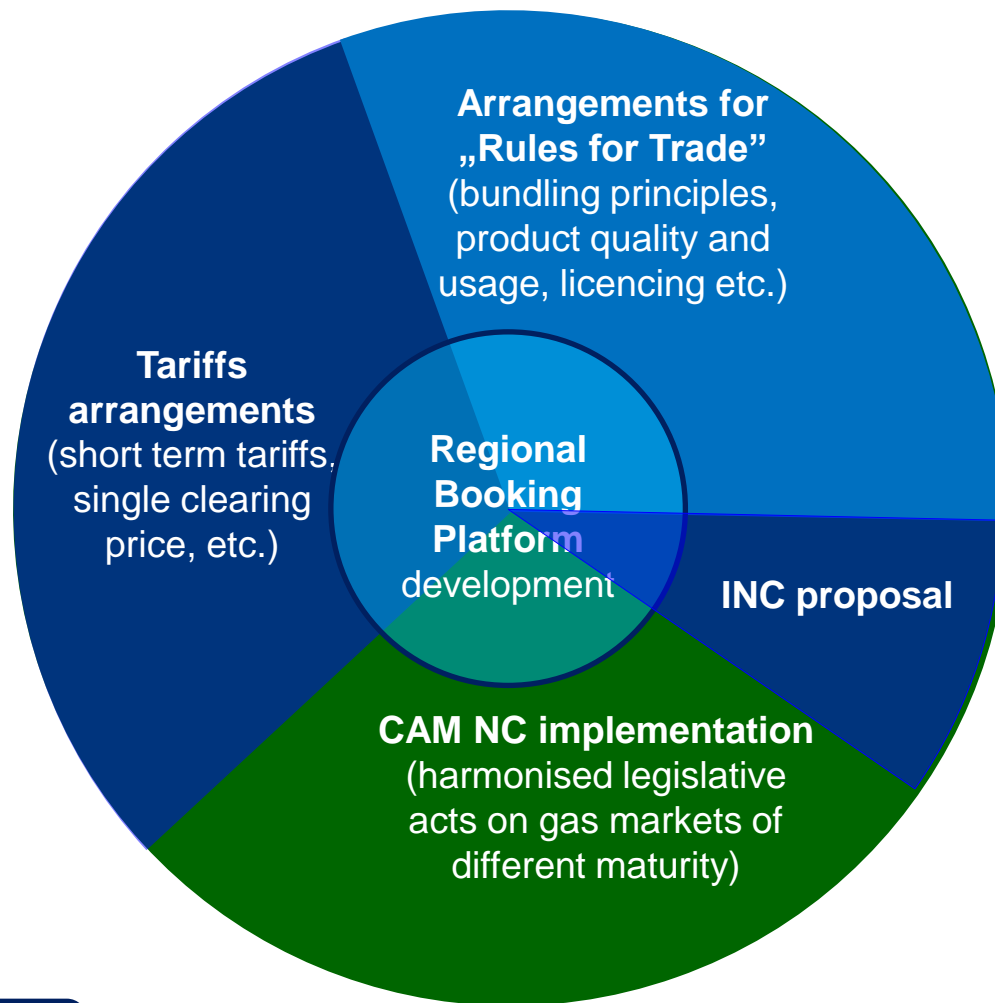


Best Employer
Central Eastern Europe 2010/2011

The 'Legend' of RBP



Scale of Challenges



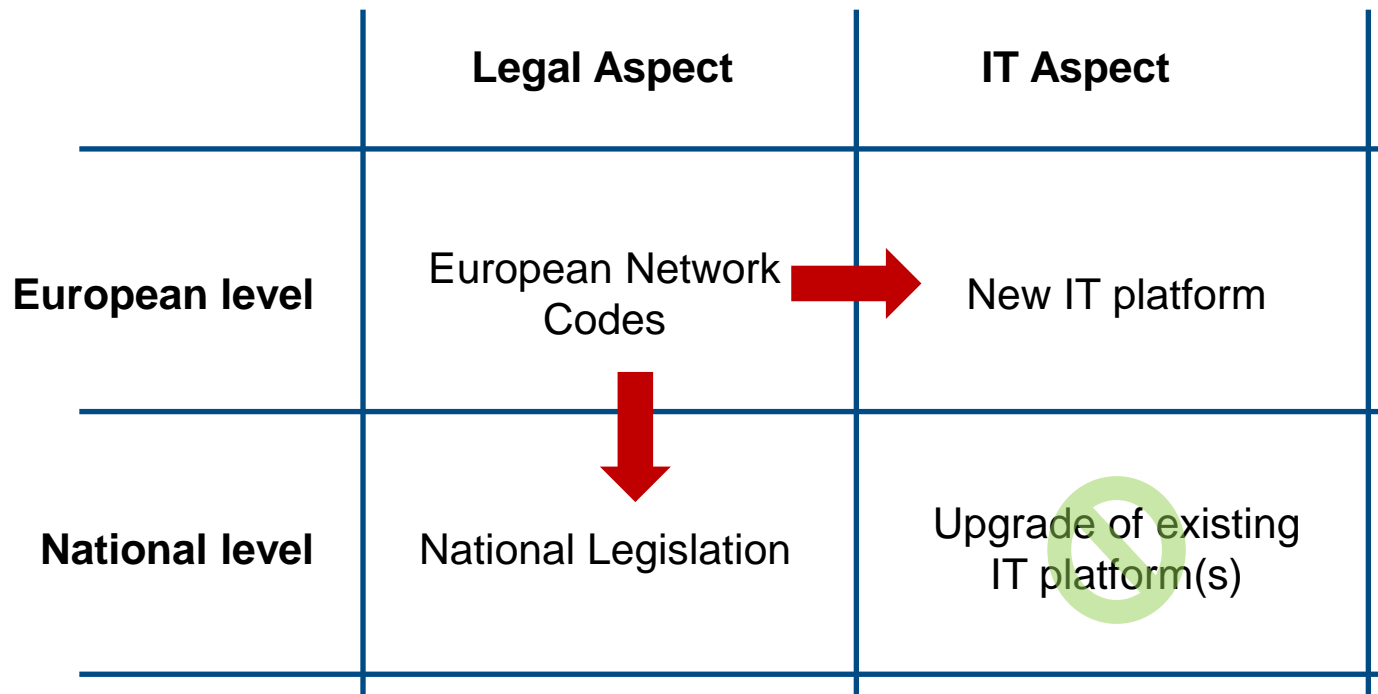
Two-tier concept

- 1) enabling CAM NC (and more NCs) in different national legislations
- 2) IT solution based on the above consideration

CAM NC Pilot

Way more is needed than providing a joint booking platform

Our Approach



A Summary of the Regional Booking Platform

- A capacity booking platform developed by FGSZ for the full compliance with CAM NC
- **Thin client solution** for both TSOs and network users (quick and easy access), which also radically limits TSO connection costs
- **IP-by-IP based** applicability (does not require exclusivity from TSOs)
- **User-friendly** interfaces
- **Robust** IT solution
 - Ability to service a high number of IPs (peak service load designed for 300 simultaneous capacity auctions)
 - 24/7 availability guaranteed by the RBP Operator (cf. within-day auctions)
- **Customisable** / on-demand functionality for TSOs and network users
- Flexible business model
- NRAs of the associated TSOs supervise platform operation

TSOs



Network Users

Producers

Traders

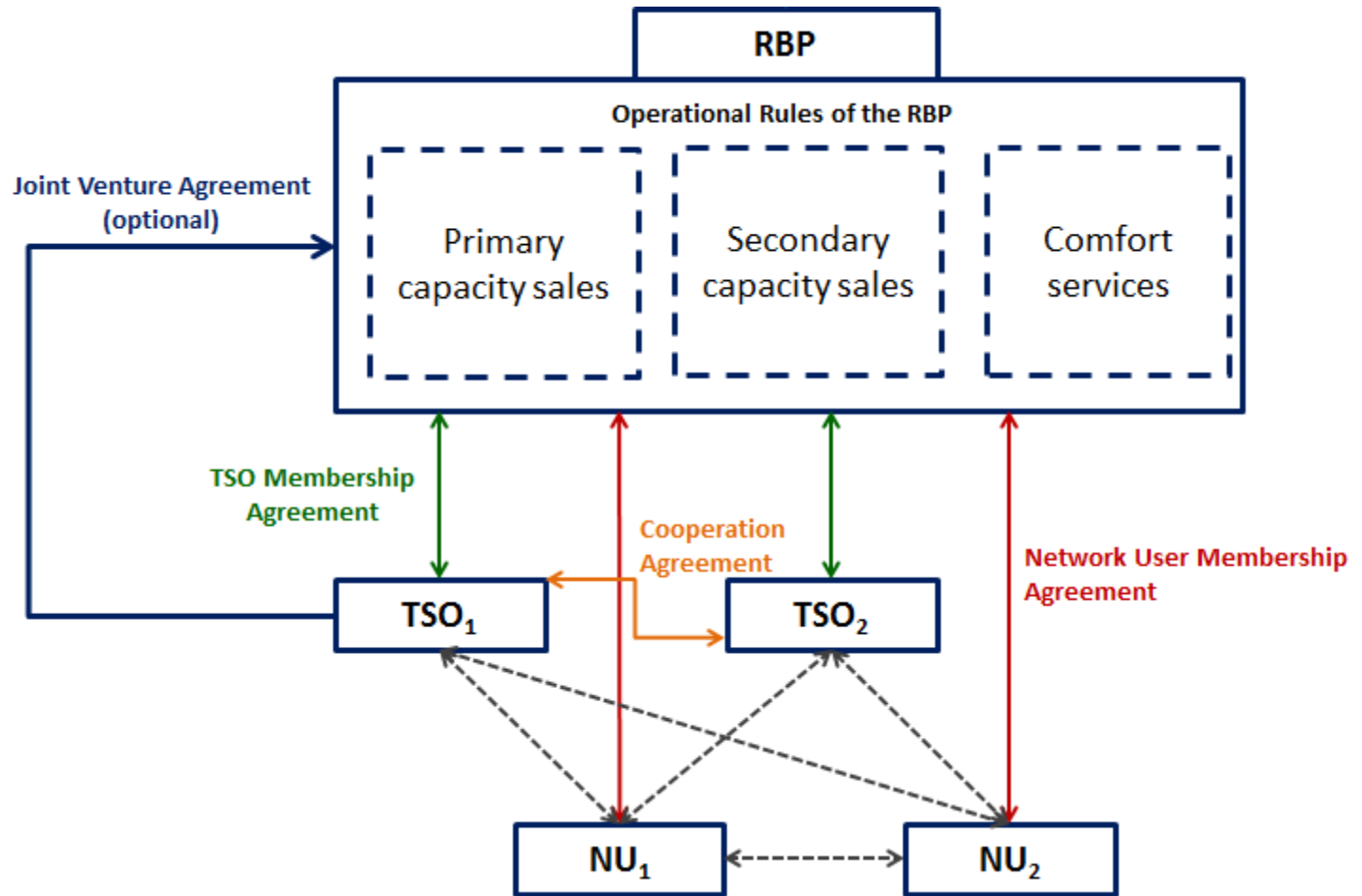
Shippers

Large consumers

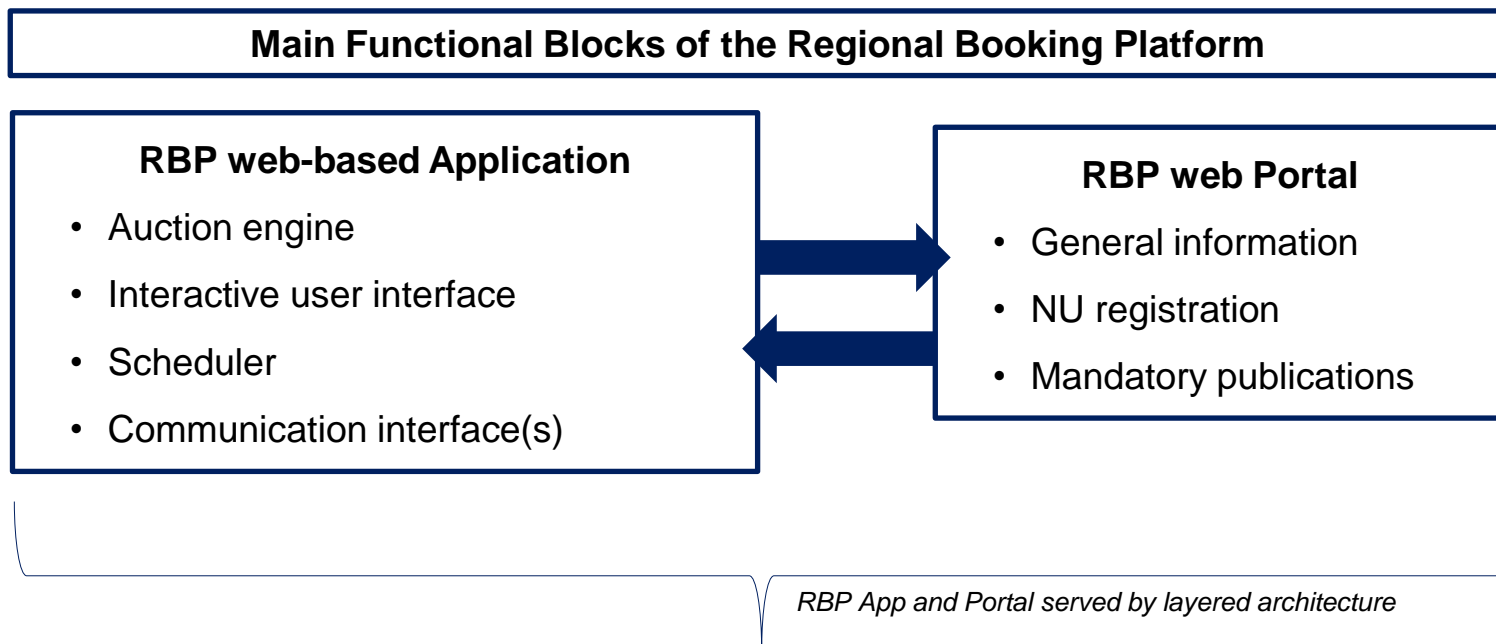


The Regional Booking Platform

Contractual Model of the RBP



A Functional Overview of RBP



LAYER 1: PROXY

- Divert users into an ACTIVE set of servers, support test and replay functions (maintenance), and SILENT operation using mirrored and persisted commands

LAYER 2: APPLICATION

- Active/Passive environment (no shutdown needed for change)

LAYER 3: DATABASE

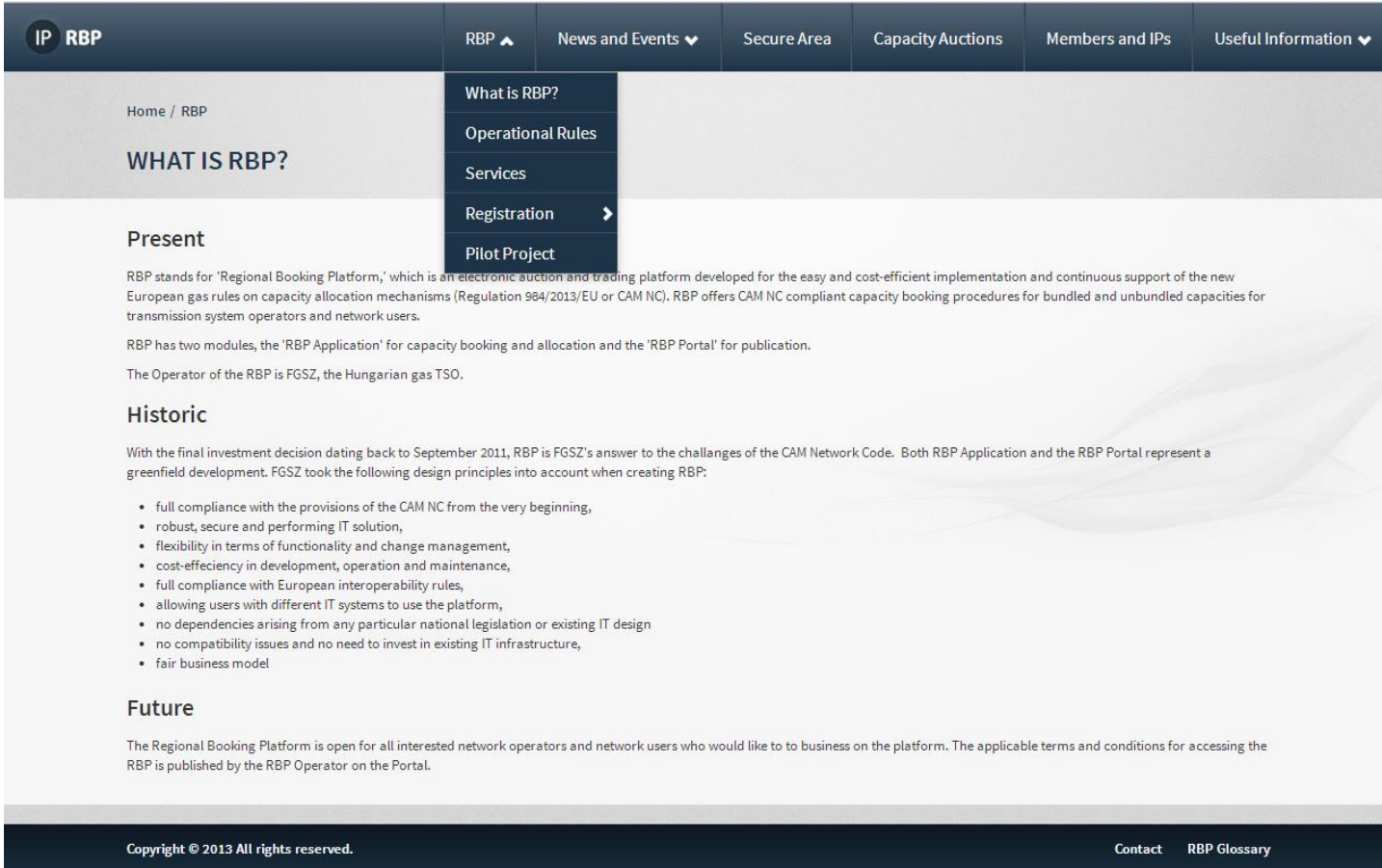
- Oracle DB
- Source of reports, data exchange

SYNCHRONISING between layers

- Oracle Streams technology

Regional Booking Platform – Portal

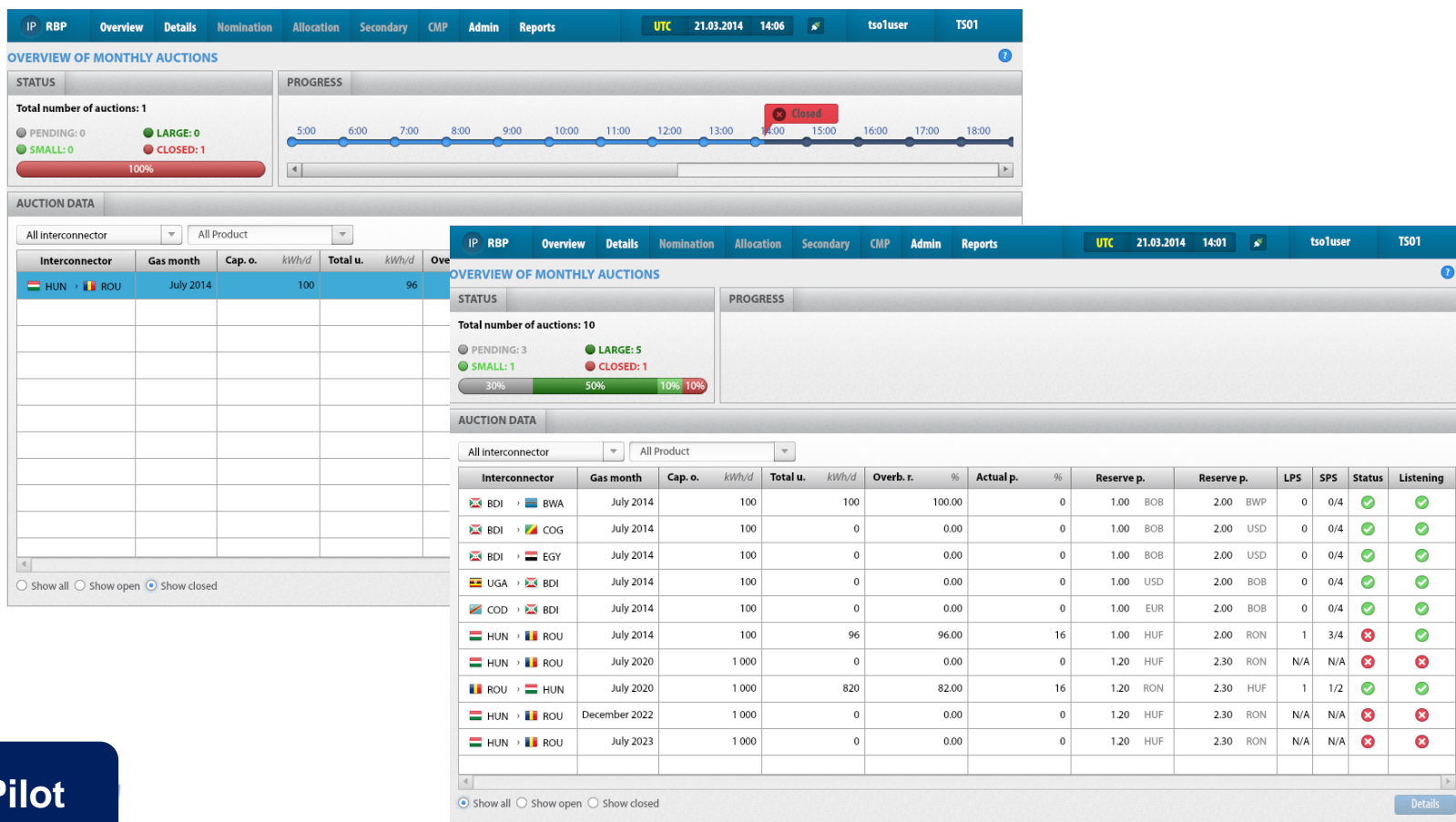
- Publication portal for auction results and other information related to the RBP



The screenshot shows the RBP Portal website. At the top, there is a dark blue navigation bar with the following items: 'IP RBP', 'RBP ^', 'News and Events v', 'Secure Area', 'Capacity Auctions', 'Members and IPs', and 'Useful Information v'. Below the navigation bar, the main content area is divided into sections. The first section is titled 'WHAT IS RBP?' and contains a sub-menu with the following items: 'What is RBP?', 'Operational Rules', 'Services', 'Registration >', and 'Pilot Project'. The 'Registration >' item is highlighted with a right-pointing arrow. Below the sub-menu, the text reads: 'RBP stands for 'Regional Booking Platform,' which is an electronic auction and trading platform developed for the easy and cost-efficient implementation and continuous support of the new European gas rules on capacity allocation mechanisms (Regulation 984/2013/EU or CAM NC). RBP offers CAM NC compliant capacity booking procedures for bundled and unbundled capacities for transmission system operators and network users. RBP has two modules, the 'RBP Application' for capacity booking and allocation and the 'RBP Portal' for publication. The Operator of the RBP is FGSZ, the Hungarian gas TSO. The second section is titled 'Historic' and contains the text: 'With the final investment decision dating back to September 2011, RBP is FGSZ's answer to the challenges of the CAM Network Code. Both RBP Application and the RBP Portal represent a greenfield development. FGSZ took the following design principles into account when creating RBP:' followed by a bulleted list of design principles. The third section is titled 'Future' and contains the text: 'The Regional Booking Platform is open for all interested network operators and network users who would like to to business on the platform. The applicable terms and conditions for accessing the RBP is published by the RBP Operator on the Portal.' At the bottom of the page, there is a dark blue footer with the text: 'Copyright © 2013 All rights reserved.' and 'Contact RBP Glossary'.

Regional Booking Platform – Application

- TSOs set up auctions online on RBP, where all auction features are flexible parameters (auction calendar, network user access control, price steps, currency etc.)



The screenshot displays the RBP interface with two overlapping windows. The top window shows the 'OVERVIEW OF MONTHLY AUCTIONS' for a specific auction, with a progress bar indicating 100% completion. The bottom window shows a table of auction data for various interconnectors.

OVERVIEW OF MONTHLY AUCTIONS (Top Window)

STATUS: Total number of auctions: 1
 ● PENDING: 0 ● LARGE: 0
 ● SMALL: 0 ● CLOSED: 1
 100%

OVERVIEW OF MONTHLY AUCTIONS (Bottom Window)

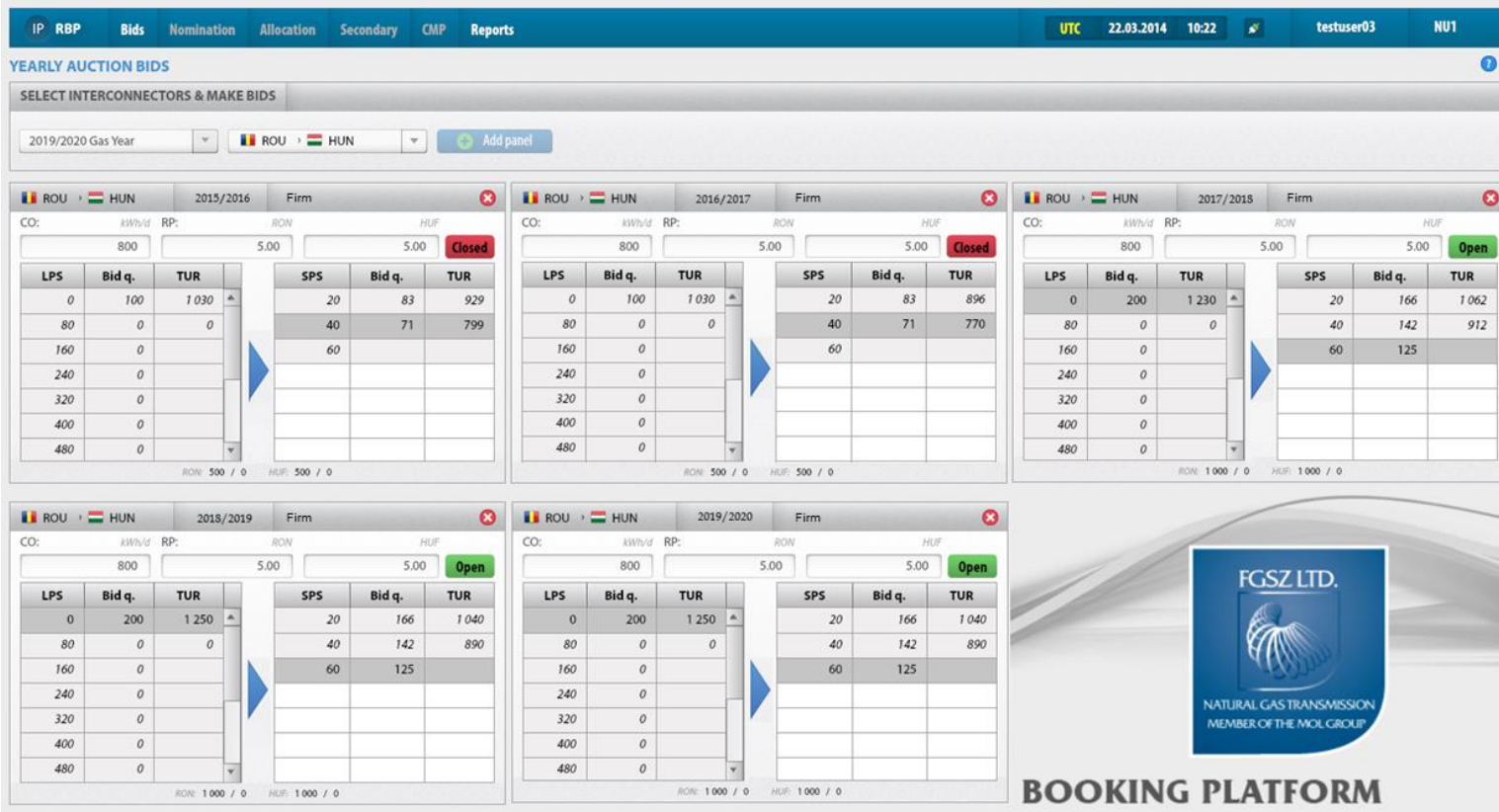
STATUS: Total number of auctions: 10
 ● PENDING: 3 ● LARGE: 5
 ● SMALL: 1 ● CLOSED: 1
 30% 50% 10%

AUCTION DATA (Bottom Window Table)

Interconnector	Gas month	Cap. o.	kWh/d	Total u.	kWh/d	Overb. r.	%	Actual p.	%	Reserve p.	Reserve p.	LPS	SPS	Status	Listening
HUN → ROU	July 2014	100		96										✓	✓
BDI → BWA	July 2014	100	100	100		100.00		0		1.00 BOB	2.00 BWP	0	0/4	✓	✓
BDI → COG	July 2014	100		0		0.00		0		1.00 BOB	2.00 USD	0	0/4	✓	✓
BDI → EGY	July 2014	100		0		0.00		0		1.00 BOB	2.00 USD	0	0/4	✓	✓
UGA → BDI	July 2014	100		0		0.00		0		1.00 USD	2.00 BOB	0	0/4	✓	✓
COD → BDI	July 2014	100		0		0.00		0		1.00 EUR	2.00 BOB	0	0/4	✓	✓
HUN → ROU	July 2014	100		96		96.00		16		1.00 HUF	2.00 RON	1	3/4	✗	✓
HUN → ROU	July 2020	1000		0		0.00		0		1.20 HUF	2.30 RON	N/A	N/A	✗	✗
ROU → HUN	July 2020	1000		820		82.00		16		1.20 RON	2.30 HUF	1	1/2	✓	✓
HUN → ROU	December 2022	1000		0		0.00		0		1.20 HUF	2.30 RON	N/A	N/A	✗	✗
HUN → ROU	July 2023	1000		0		0.00		0		1.20 HUF	2.30 RON	N/A	N/A	✗	✗

Regional Booking Platform – Application

- RBP allows bidding for 6 auctions per tab
- The number of tabs are not limited



The screenshot displays the 'YEARLY AUCTION BIDS' interface. At the top, there is a navigation bar with 'IP RBP', 'Bids', 'Nomination', 'Allocation', 'Secondary', 'CMP', and 'Reports'. The user is logged in as 'testuser03' on '22.03.2014' at '10:22'. The main area is titled 'SELECT INTERCONNECTORS & MAKE BIDS' and shows a dropdown for '2019/2020 Gas Year' and a selection for 'ROU' to 'HUN'. Below this, four auction panels are visible, each for a different year: 2015/2016, 2016/2017, 2018/2019, and 2019/2020. Each panel includes a 'CO:' field, 'kWh/d' and 'RP' values, and 'RON' and 'HUF' rates. The panels are labeled 'Firm' and have status buttons: 'Closed' for 2015/2016 and 2016/2017, and 'Open' for 2018/2019 and 2019/2020. Each panel contains two tables: 'LPS' and 'SPS'. The 'LPS' table has columns for 'Bid q.' and 'TUR', and the 'SPS' table has columns for 'Bid q.' and 'TUR'. The 'TUR' column in the 'LPS' table has a vertical slider. The 'SPS' table has a 'TUR' column with a vertical slider. The 'LPS' table has a 'TUR' column with a vertical slider. The 'SPS' table has a 'TUR' column with a vertical slider.

LPS	Bid q.	TUR	SPS	Bid q.	TUR
0	100	1 030	20	83	929
80	0	0	40	71	799
160	0		60		
240	0				
320	0				
400	0				
480	0				



BOOKING PLATFORM

Plans for the Near Future

HU-RO Pilot

- Potentially more than just monthly bundled capacities

Mass Auctions

- 400+ Hungarian network points allocated via simultaneous auctions from March 2015 (bundled and unbundled)

Extension of Bundling

- Talks to extend bundling to domestic storages (transmission+storage capacities)



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Thank you for your kind attention!

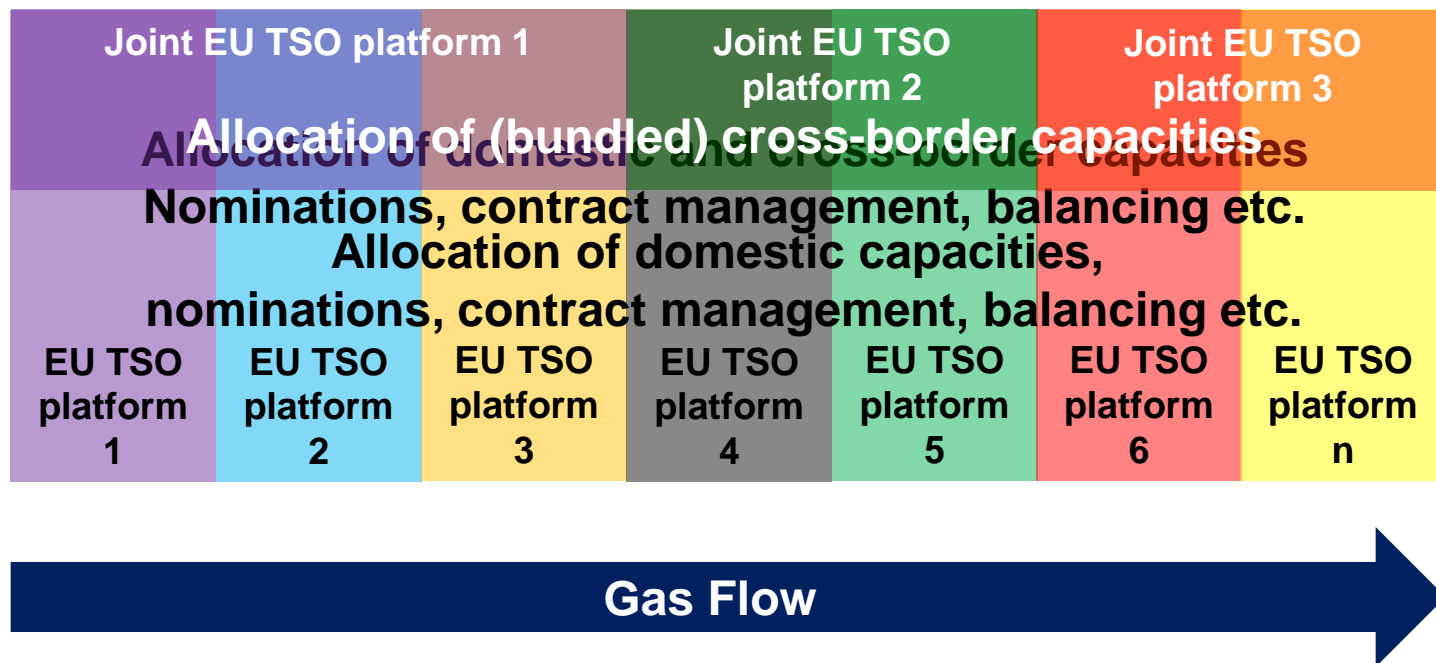
Contact: rbp@fgsz.hu or pilot_rbp@transgaz.ro



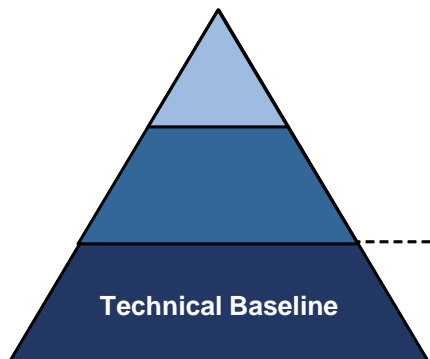
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Backup slides

Joint Capacity Booking Platforms in the EU

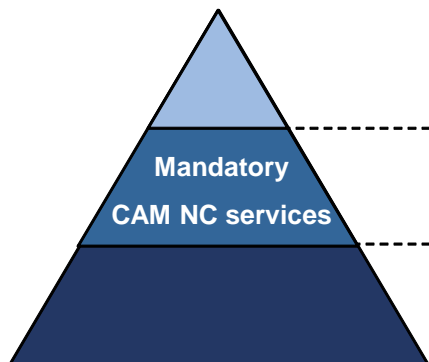


Technical Background of the Regional Booking Platform



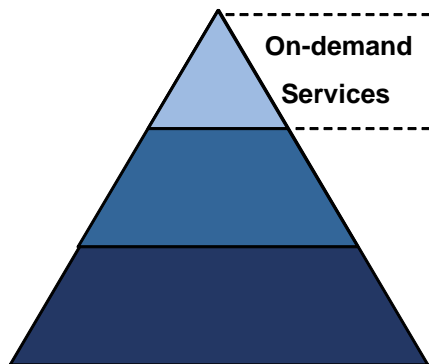
- Layered IT architecture
 - Proxy
 - Application
 - Database
- IT solutions and licences used mainly by HP (hardware), Red Hat and Oracle (software)
- Continuous hot backup provided and disaster-proof secondary site arranged
- Test environment permanently available for network users and TSOs
- 24/7 technical helpdesk
- Secured areas are accessed via digital certificates

CAM NC Services of the Regional Booking Platform



- Product bundling or joint unbundled allocation
- Ascending clock algorithm
- Uniform price algorithm
- Bundled capacity allocation, using the above algorithms
- Unbundled capacity allocation, using the above algorithms
- Yearly, quarterly, monthly, daily and within-day auctions
- Electronic contracting
- Multi-currency handling
- Credit limit management
- Regulatory license management
- OTC secondary market for bundled and unbundled capacities

On-Demand Services of the Regional Booking Platform



- Flexible auctions (non-standard capacity products, auction calendar and auction scheduling)
- Single-sided nominations and allocation (although a CAM NC requirement, this is not specified for the booking platform)
- Route bundling
- Parallel bidding ladders (incremental capacity auctions)
- CMP for bundled capacities
- Multi-language interfaces
- SOAP interfaces
- Non-mandatory publication services
- Exchange-like (cleared, anonymous) secondary capacity market

Cost Allocation Model of RBP

