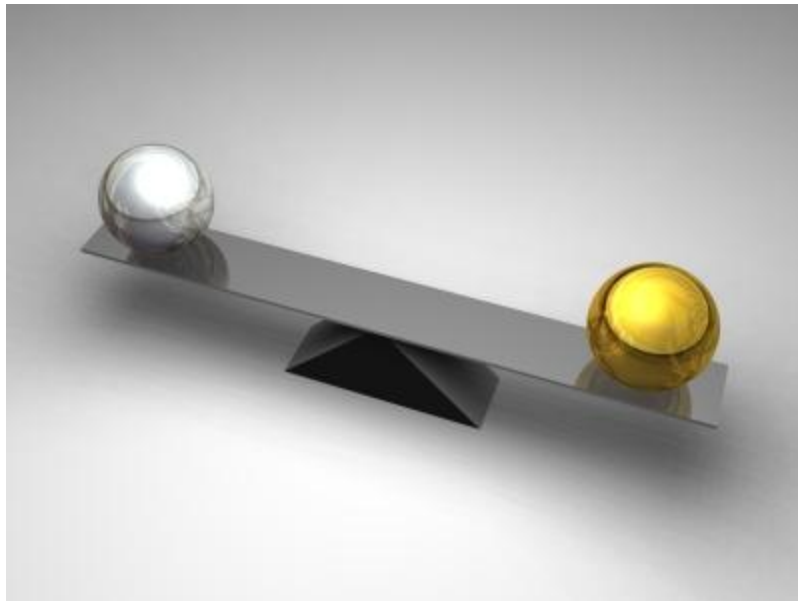


## Software Rates vs Price of Function Points

## An Updated Cost Analysis



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Productivity&Estimations Area  
Director

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Nowadays, in Software Development Contracts the key elements determining the price are: the Rate and the Effort.

The possibility to measure the quantity of software produced (the size in Function Points) allows us to assess whether there is a logical connection between the price of the projects and the software actually produced.

**The main goal of this presentation is to show what happens with the FP price in several scenarios:**

- ✓ **G1.** Implementing estimation models.
- ✓ **G2.** Implementing productivity models.
- ✓ **G3.** Introducing new competitors in a productivity model.
- ✓ **G4.** De-localizing providers.

# Agenda

- **Background**
- **Objective**
- **2014 vs 2012 benchmarking**
- **Case studies**
- **Conclusions**

# Background

Over the last seven years, LEDAmc has managed the productivity of more than 12,000 development projects of 10 significant clients in Spain (mostly telecommunication and financial companies). They were mainly small enhancement projects.

The main goal of the measures is to control large contracts of Adaptive Maintenances, which involves the highest percentage of our clients' development budget.

In 2012 LEDAmc developed a benchmarking study with some of these projects (we selected 3,405). The purpose of the study was to analyze the relationship between the rates of the different software providers and the price of the Function Point that they were offering their clients. This study was presented:

- In the UKSMA conference in October 2012
- An updated study, in the IT Confidence Conference in Rio, in October 2013.

# Background

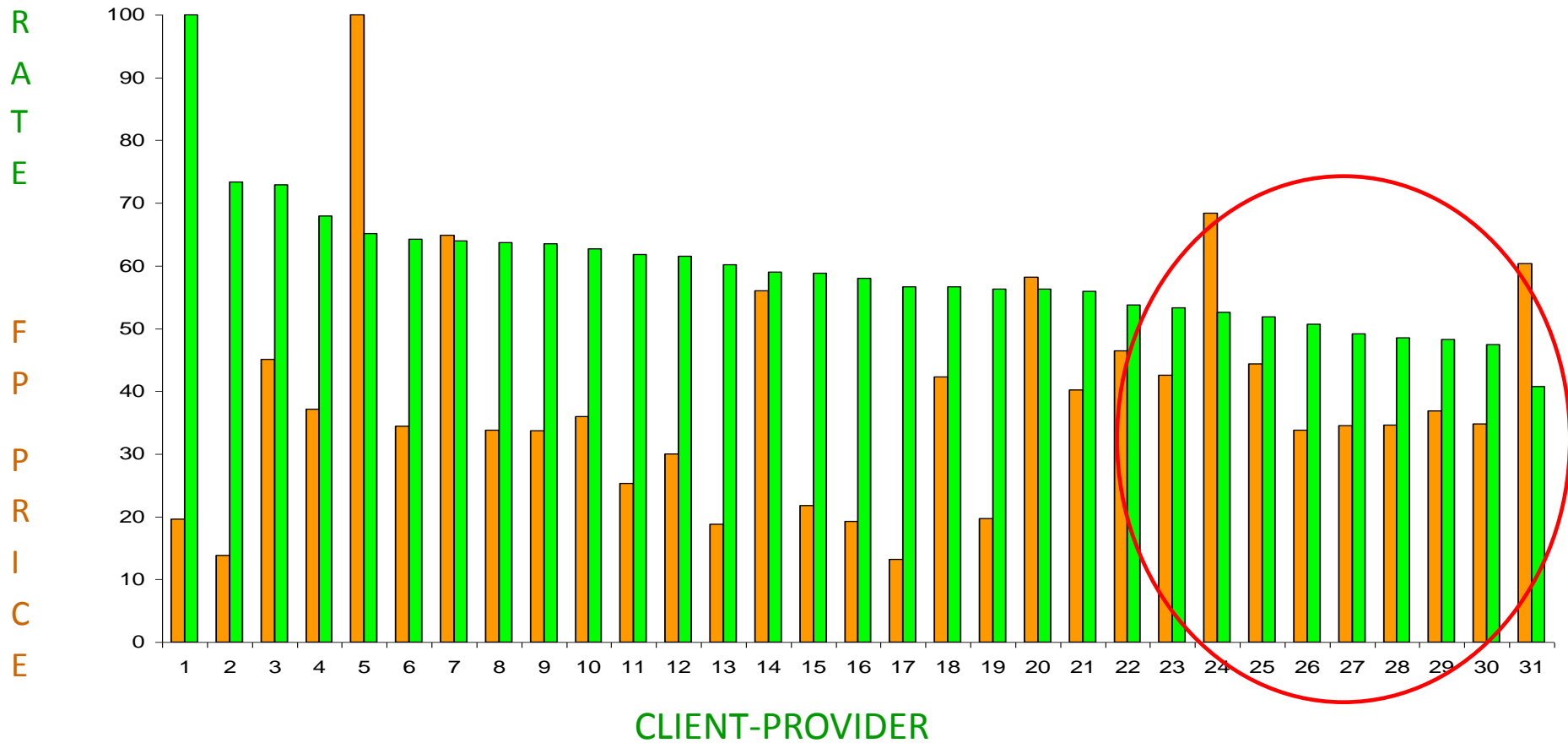
The basic numbers of the 2012 sample were:

- 10 Clients
- 14 Providers
- 3,405 Projects
- 196,356 UFP
- 2,168,192 Man Hours
- 69,926,907 Million Euros

And the main conclusions were:

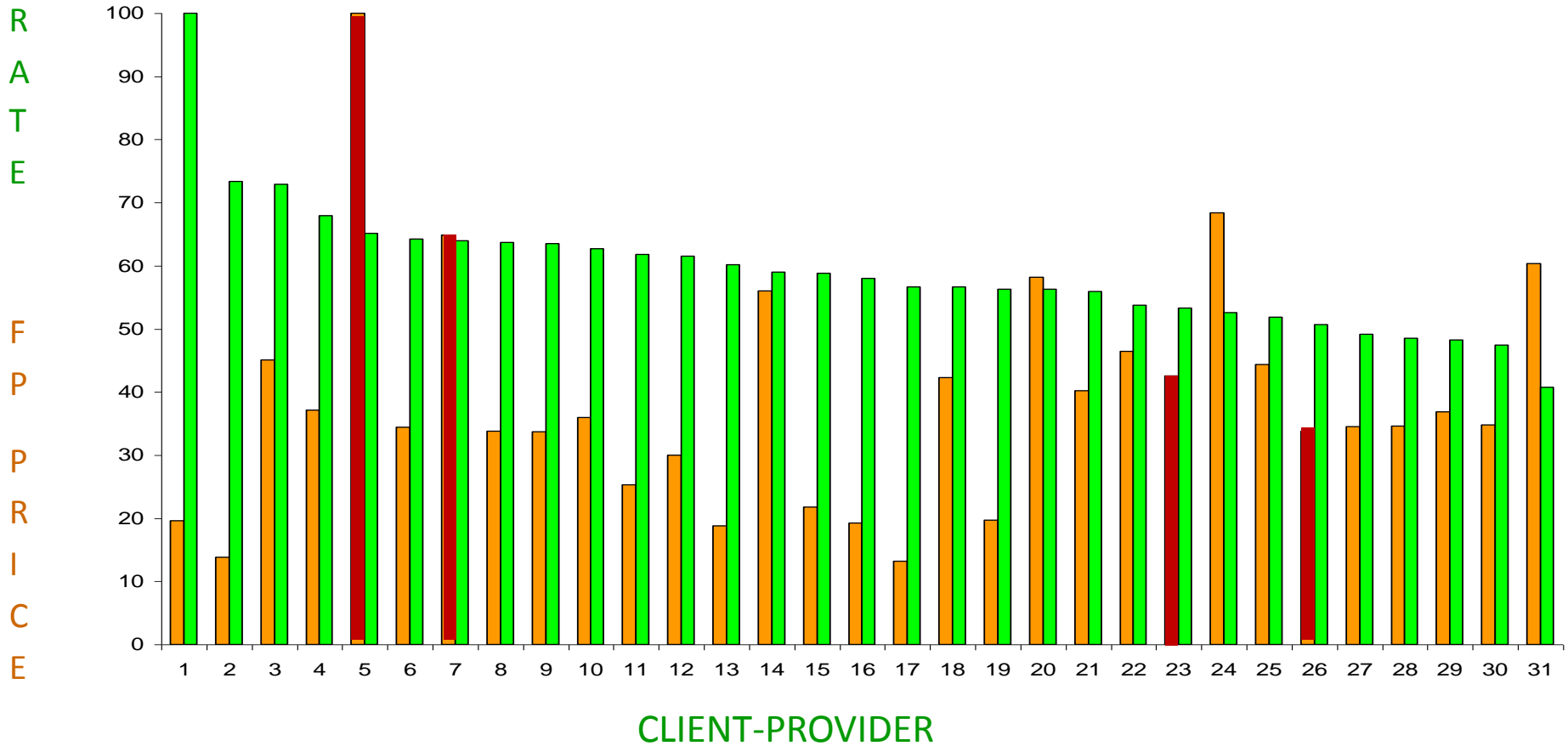
- ✓ Pressure to lower rates ends up in lower productivity and higher FP price.
- ✓ There is not a logical relationship between Rates and FP Price.
- ✓ The performance of the providers changes dramatically among clients.
- ✓ Clients with only one development provider have the highest FP Price.

# Background



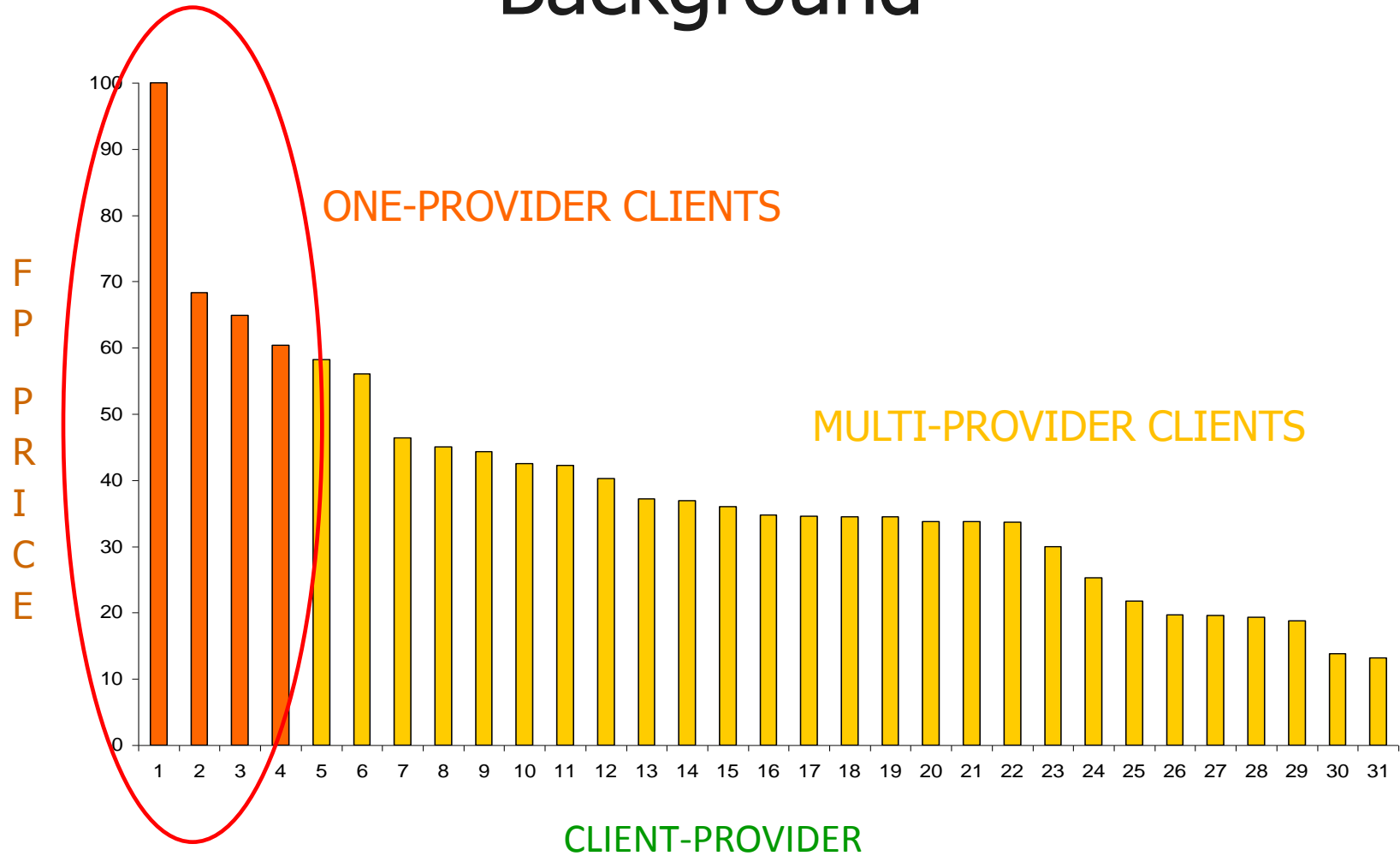
Pressure to lower rates ends up in lower productivity and higher FP price.

# Background



The same provider for different clients, offers significant differences in FP price.

# Background



The price of the FP with only one provider is higher.



# Objective

LEDAmc has been continuously working for most of those clients, implementing Software Development Productivity Models over the last two years.

Our productivity benchmarking data base has grown: It has more data for the same clients and new clients have been included.

The main goal of this presentation is to show what has happened in these two years with clients who have worked hard to improve their software development productivity.

- ✓ We will first explain the general evolution of the Function Point Price for those clients, comparing 2012 and 2014 benchmarks.
- ✓ Afterwards, we will focus on three case studies that are especially significant.
- ✓ Finally, we will draw conclusions on the economics of software management, based on our results.

# 2014 vs 2012 benchmarking

The 2014 sample were:

- Clients that were in the 2012 study and have implemented some estimation or productivity control
- 4 Clients
- 12 Providers
- 883 Projects
- 44,897 UFP
- 415,768 Man Hours
- 15,428,772 Million Euros

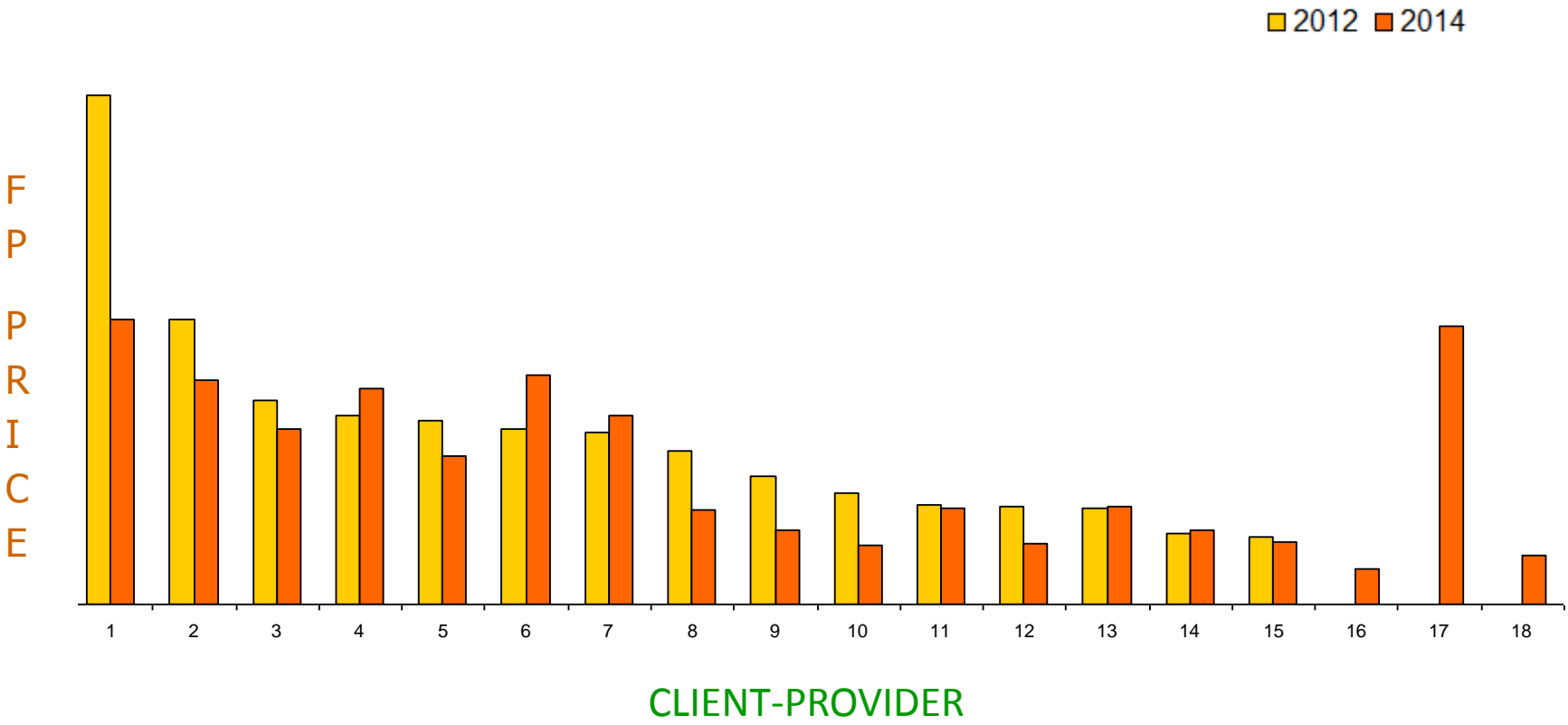
## What has happened with the FP price?

# 2014 vs 2012 benchmarking



The rates have remained almost the same.

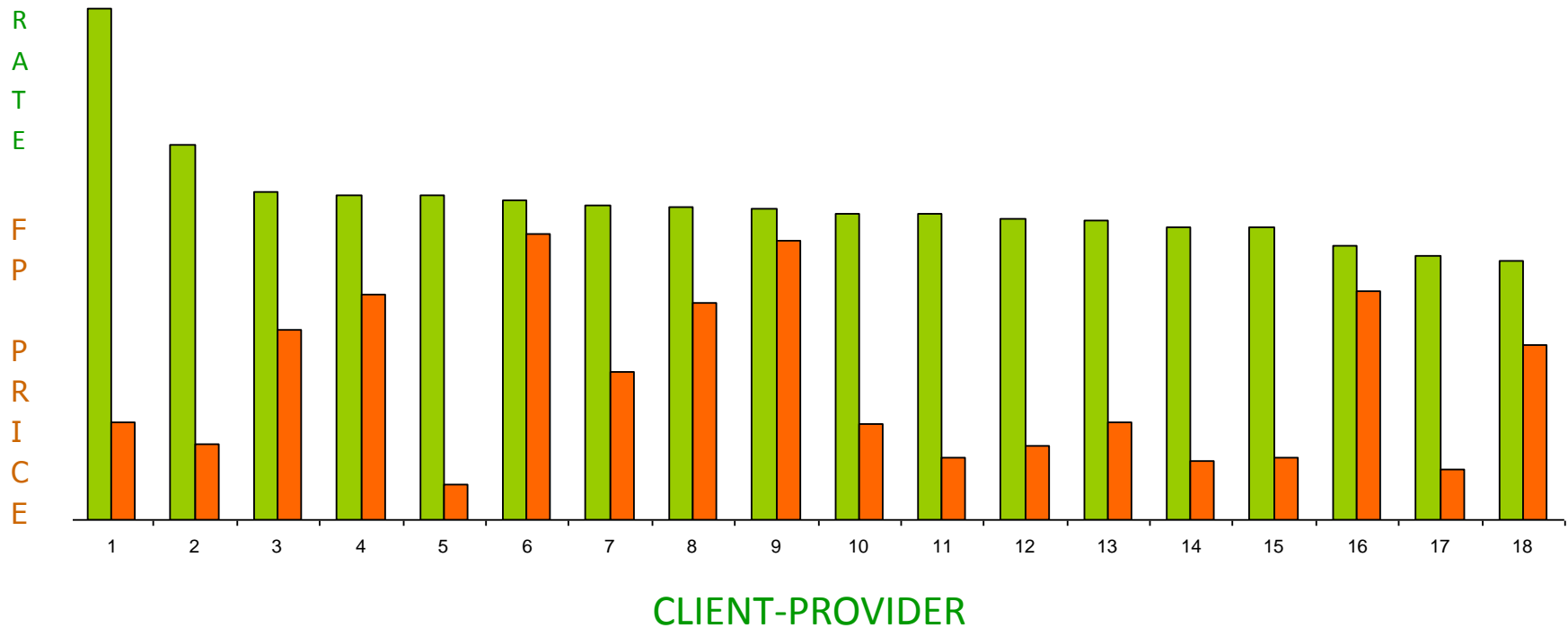
# 2014 vs 2012 benchmarking



The FP price is more homogeneous in 2014 than 2012.

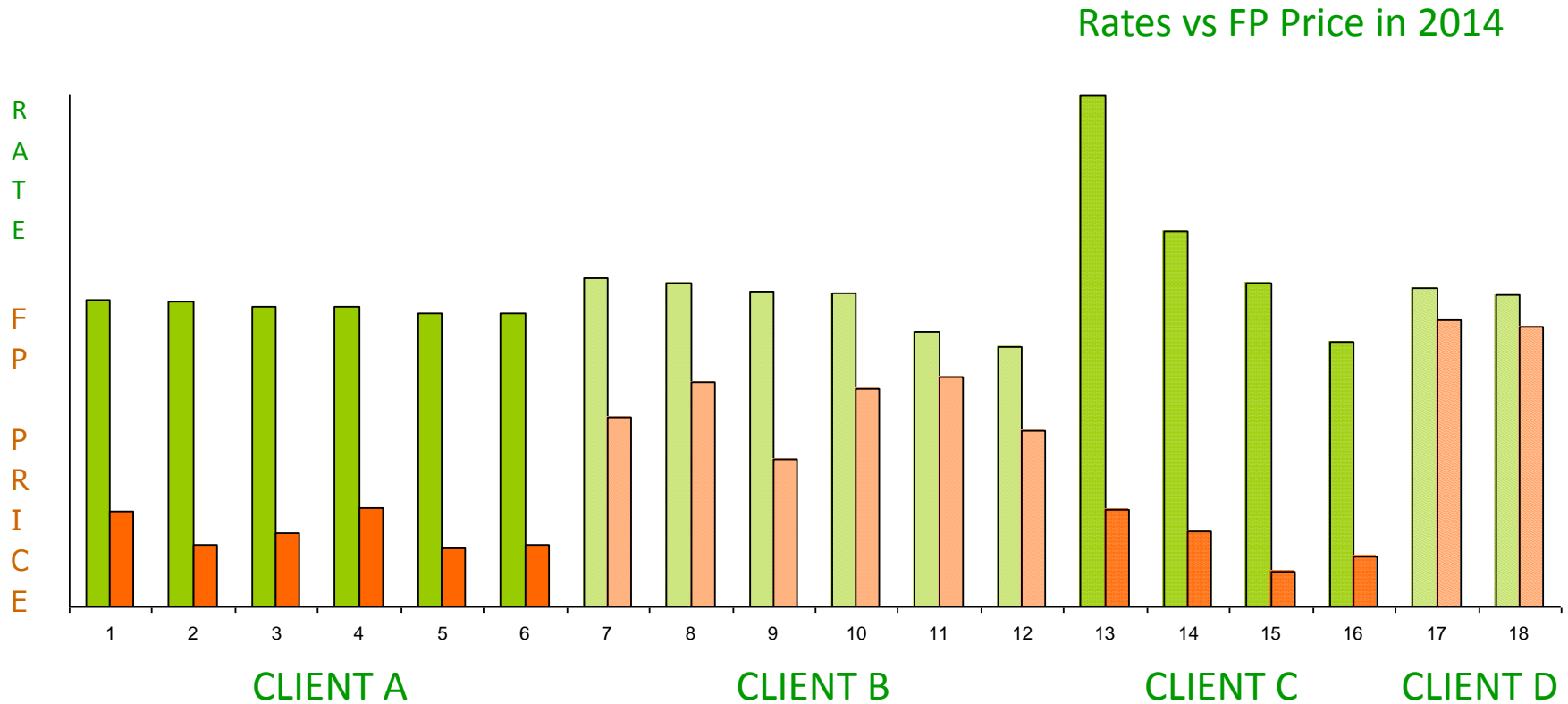
# 2014 vs 2012 benchmarking

Rates vs FP Price in 2014



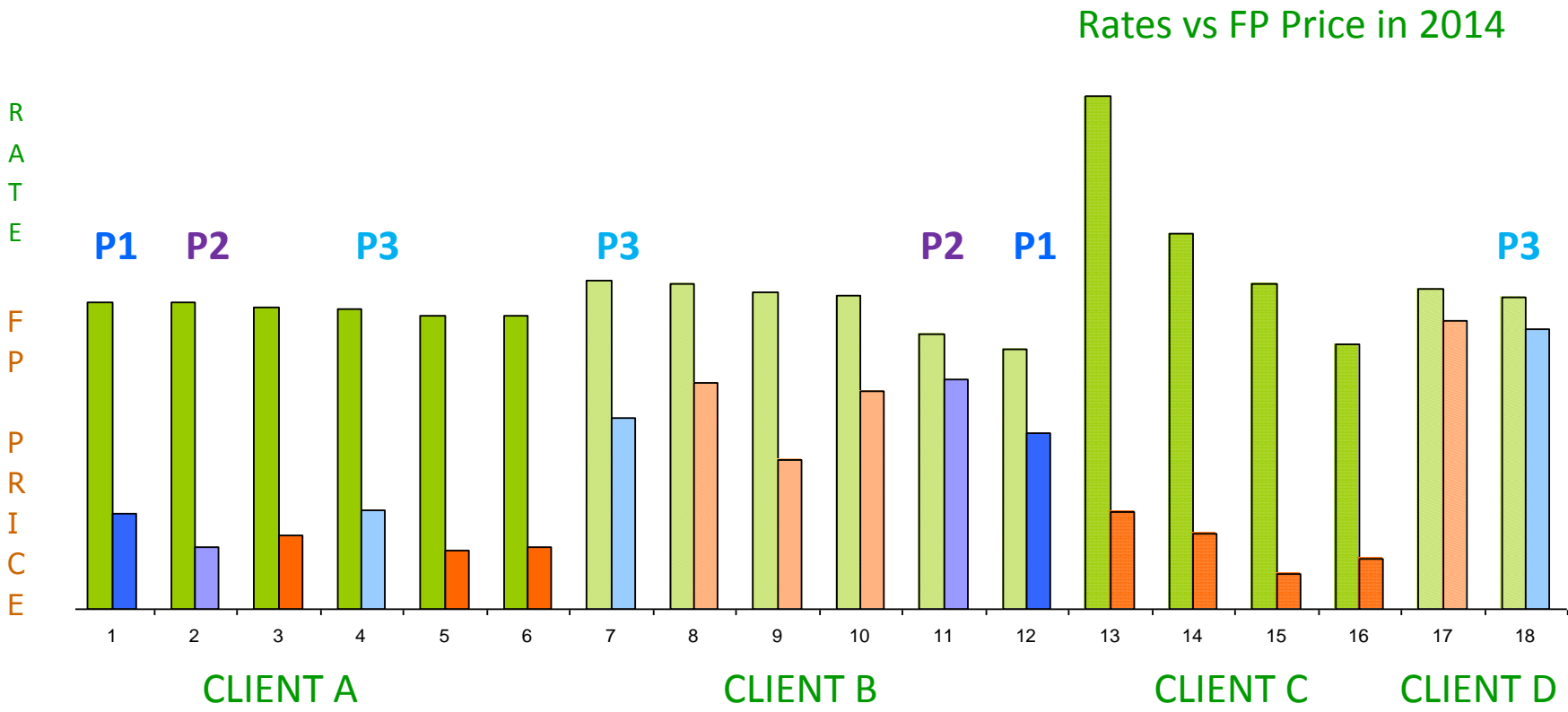
Apparently there is no relation between FP price and rate...

# 2014 vs 2012 benchmarking



.. but if we group the data by client, the results look different.

# 2014 vs 2012 benchmarking



There are big differences in the FP price for the same provider with different clients.

# 2014 vs 2012 benchmarking

## Conclusions

The results are **homogeneous** on a client basis because they have implemented estimation or productivity control models that allow them control the FP price.

Because there is no transparency in software development and the public FP price does not exist in the market, the FP price stills remains very **different among the clients**.

The natural differences of the systems architectures and processes should not imply such FP price differences.

... now we will present some case studies highlighting the change that has been produced for these clients who have introduced control systems.



# Case studies

## Case Study 1 Competition among providers + Estimation Model

### INITIAL SITUATION OF THE CLIENT (2012)

- ✓ High FP price
- ✓ Only one provider
- ✓ No estimation control

# Case studies

## Case Study 1 Competition among providers + Estimation Model

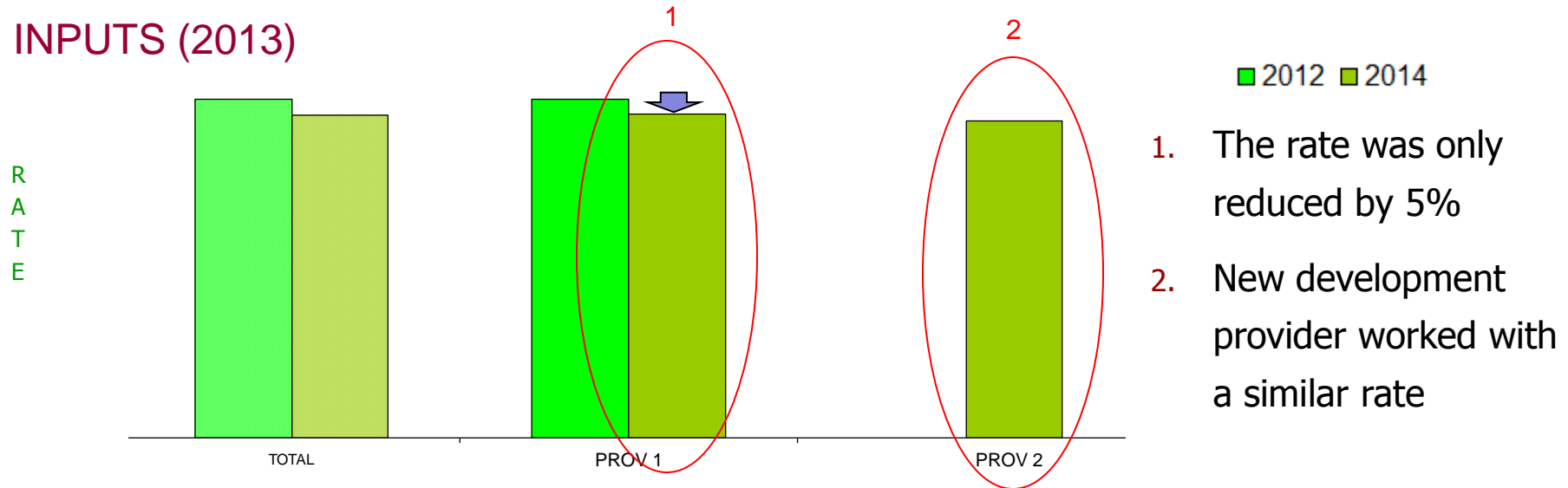
### INPUTS (2013)

- ✓ During 2013, the implementation of a centralized mechanism of estimation control has allowed to objectively contrast the costs offered by providers with corporate cost strategies.
- ✓ It includes functional sizing, as well as other sizing methods (for parametrization, technical changes, test support,..)
- ✓ Benchmarking studies helped establish a cost strategy and a target price for FP .
- ✓ Introducing a new development provider fosters competitiveness among providers and helps establish a FP price within market values.

# Case studies

## Case Study 1 Competition among providers + Estimation Model

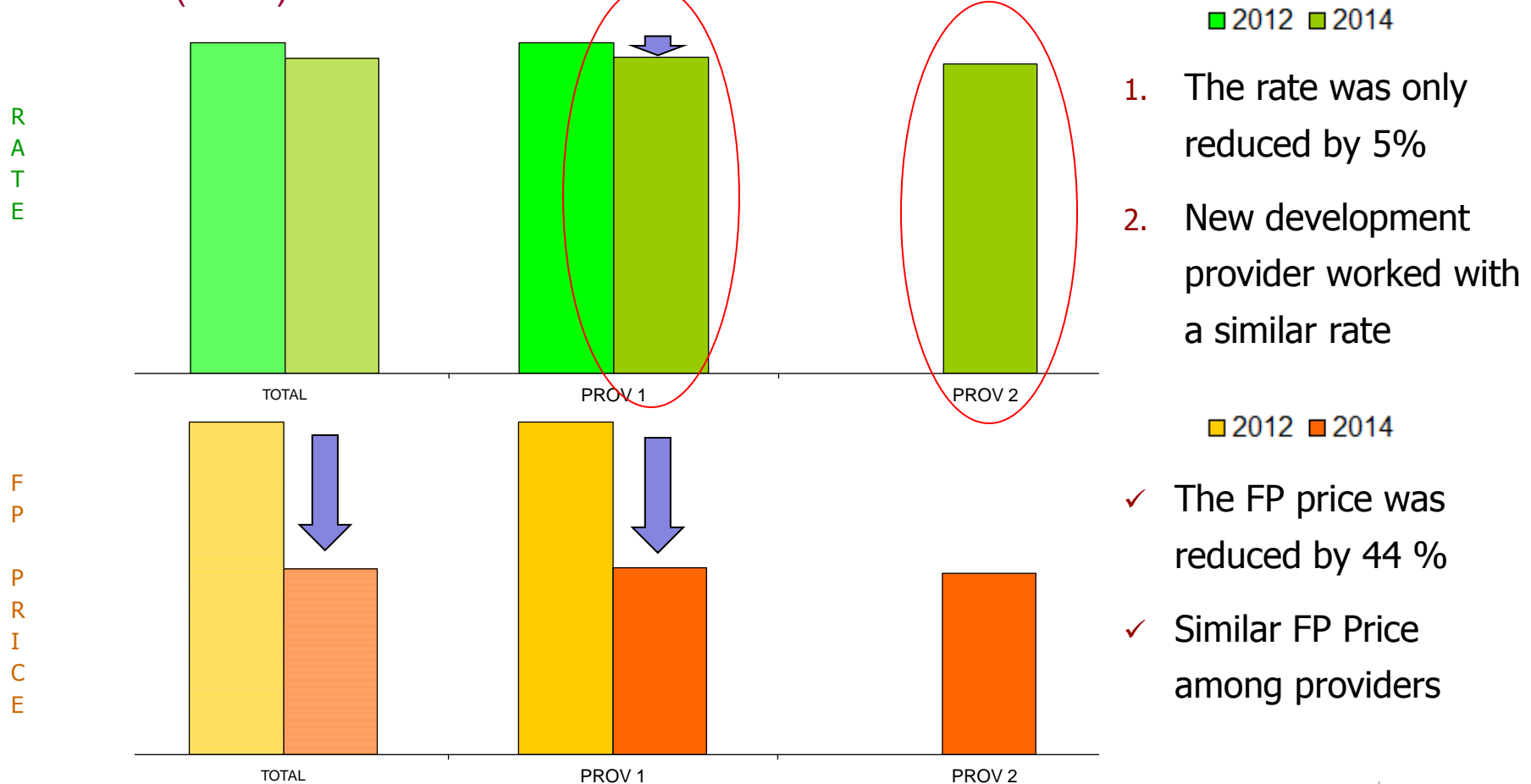
### INPUTS (2013)



# Case studies

## Case Study 1 Competition among providers + Estimation Model

### INPUTS (2013)



1. The rate was only reduced by 5%
2. New development provider worked with a similar rate

- ✓ The FP price was reduced by 44 %
- ✓ Similar FP Price among providers

# Case studies

## Case Study 1 Competition among providers + Estimation Model

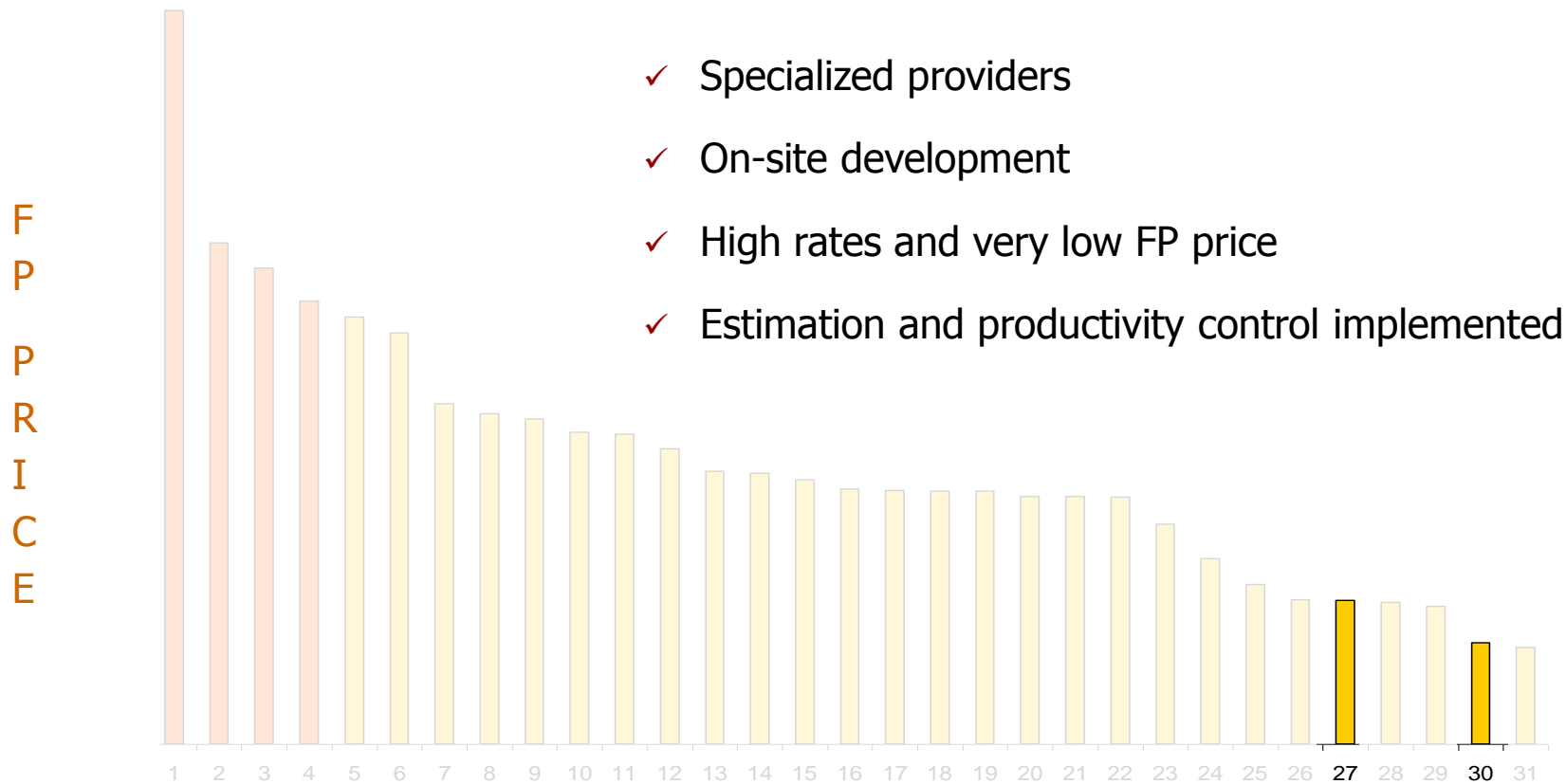
### FINAL SITUATION (2014)

- ✓ A good estimating process was used for all projects
- ✓ 44% reduction in FP price
- ✓ More than 10 Million euros saved
- ✓ FP Price within market values
- ✓ Two competing providers in 2013 – Four in 2014

# Case studies

## Case Study 2 De-localization of providers

### INITIAL SITUATION OF THE CLIENT (2012)



- ✓ Specialized providers
- ✓ On-site development
- ✓ High rates and very low FP price
- ✓ Estimation and productivity control implemented

# Case studies

## Case Study 2 De-localization of providers

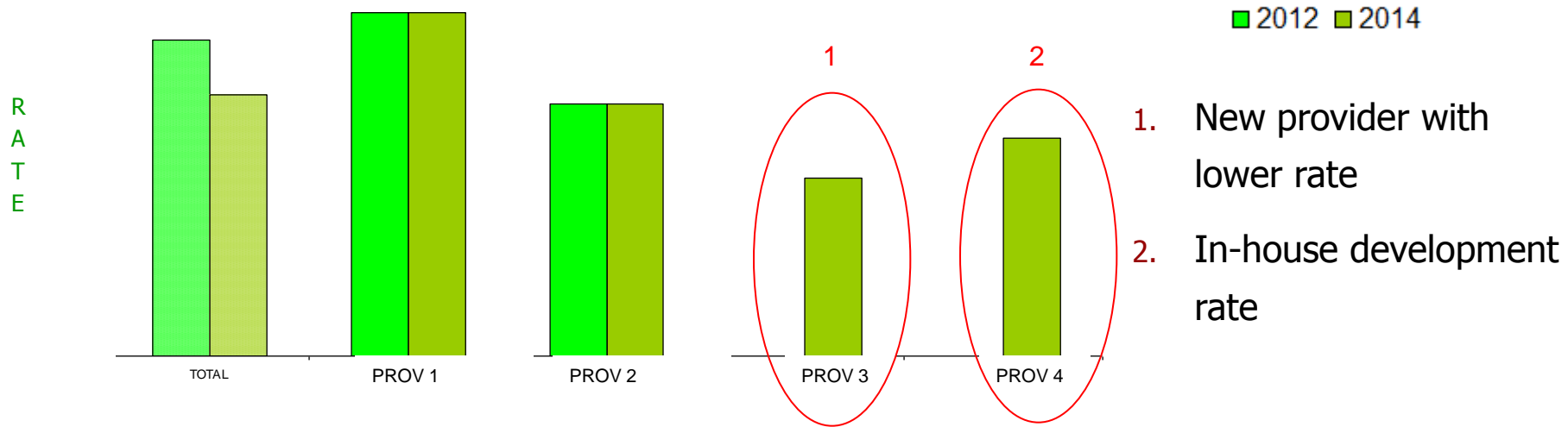
### INPUTS (2013)

- ✓ The client strategy was to proceed to the de-localization of the providers to a typical outsourced model introducing new development providers with lower rates.
- ✓ The client also decided to create an in-house development team in order to preserve and extend the know-how.

# Case studies

## Case Study 2 De-localization of providers

### INPUTS (2013)

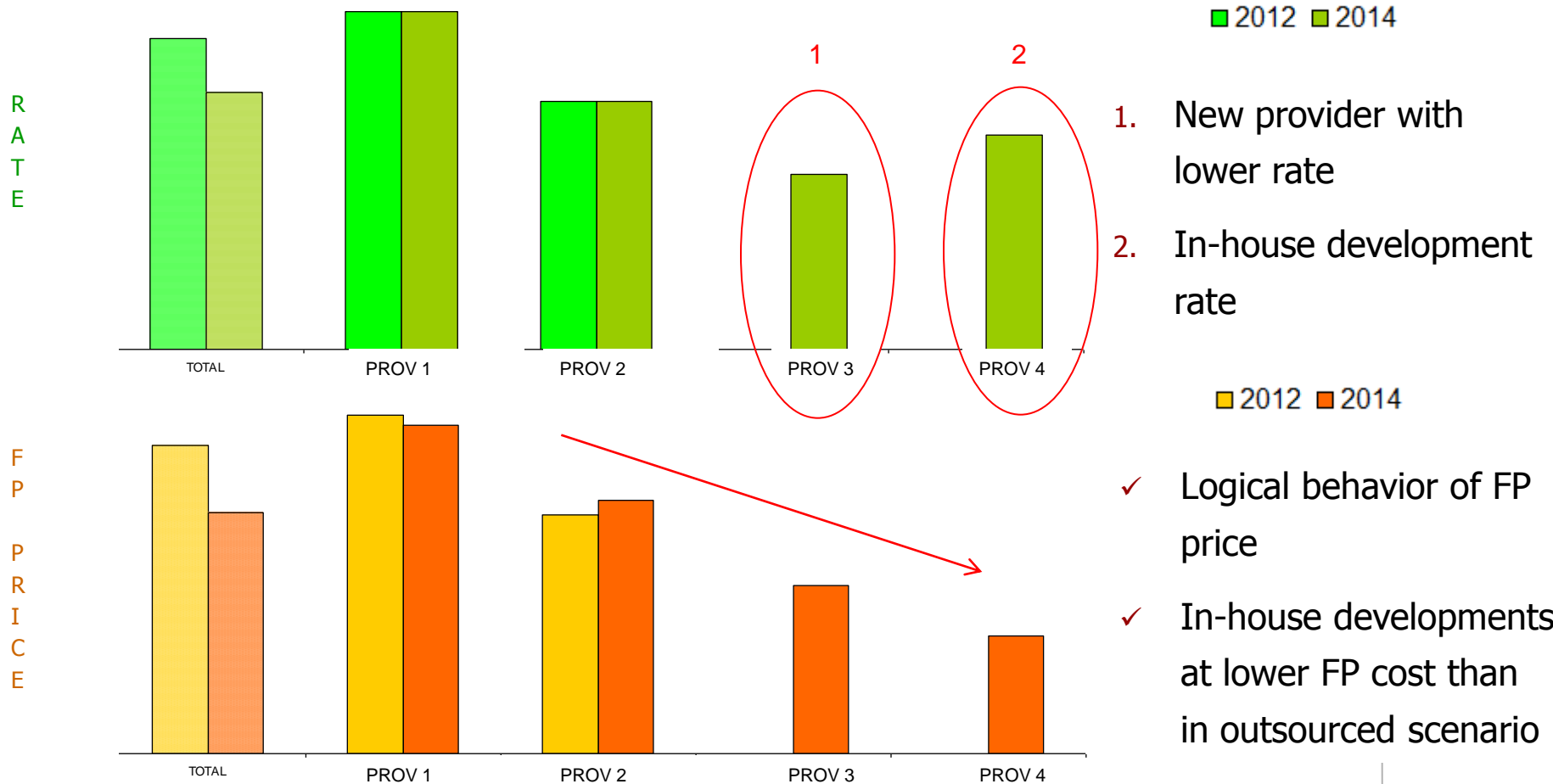




# Case studies

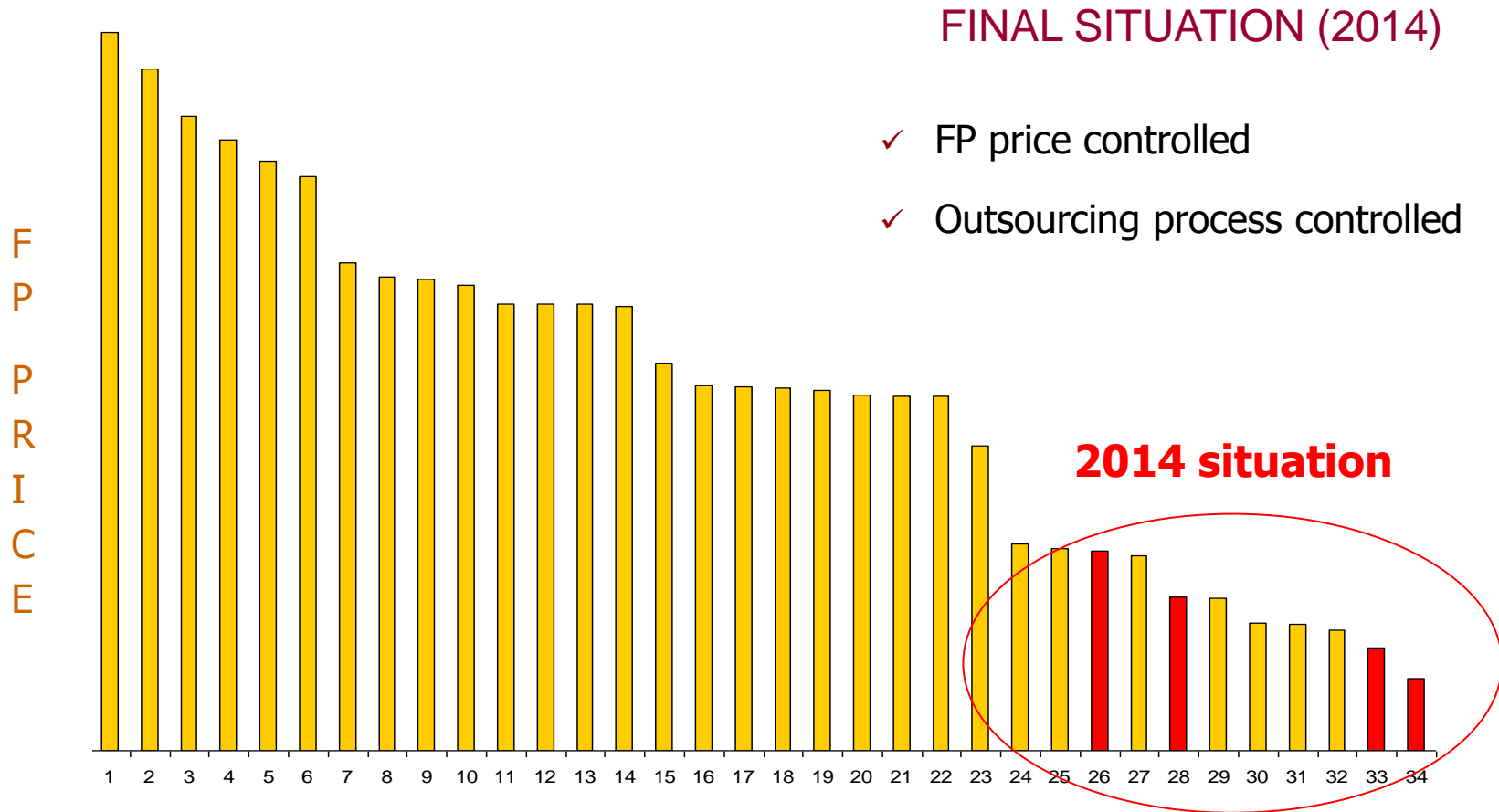
## Case Study 2 De-localization of providers

### INPUTS (2013)



# Case studies

## Case Study 2 De-localization of providers

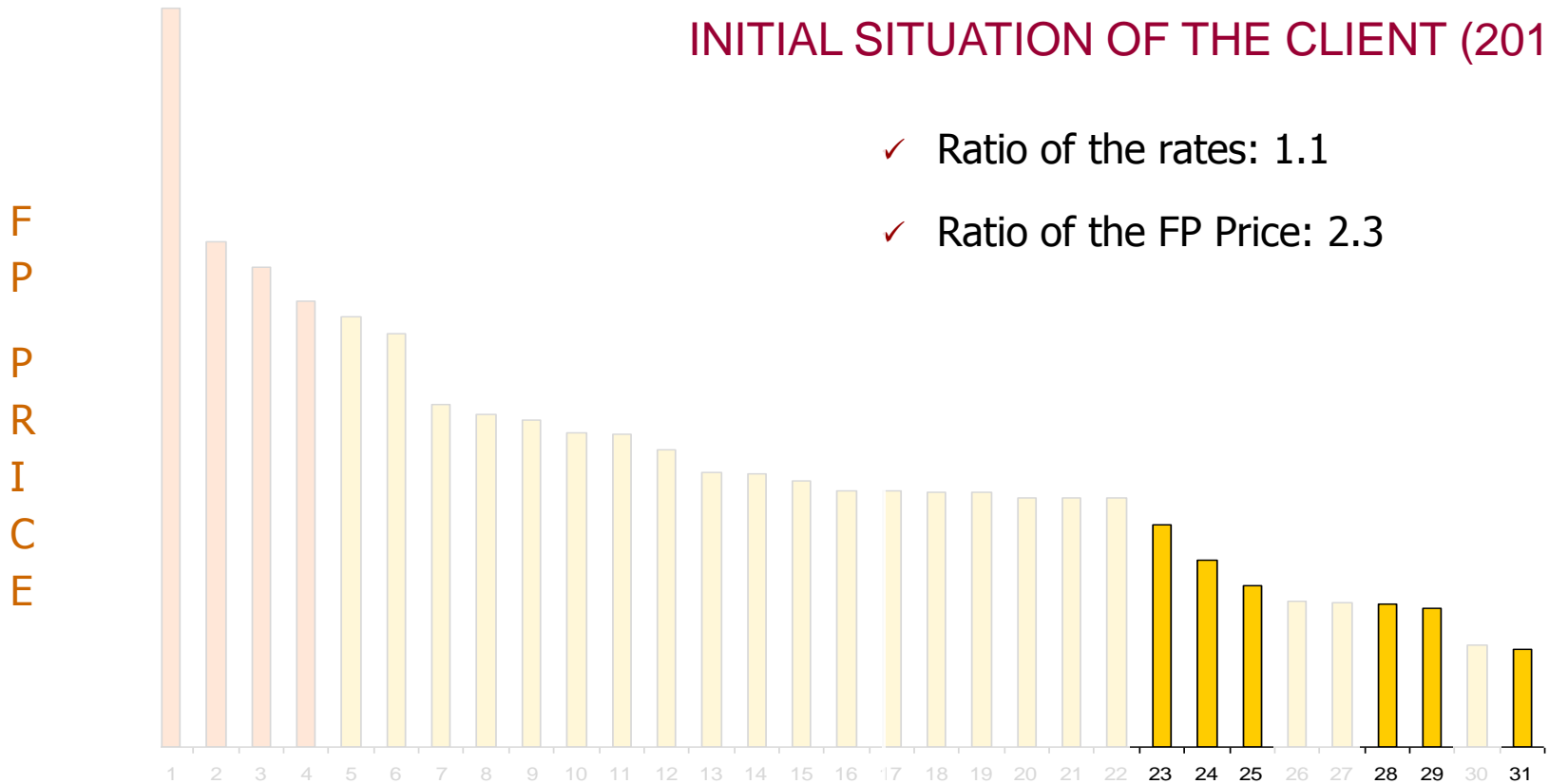


# Case studies

## Case Study 3 Controlling large maintenance contracts

### INITIAL SITUATION OF THE CLIENT (2012)

- ✓ Ratio of the rates: 1.1
- ✓ Ratio of the FP Price: 2.3



# Case studies

## Case Study 3 Controlling large maintenance contracts

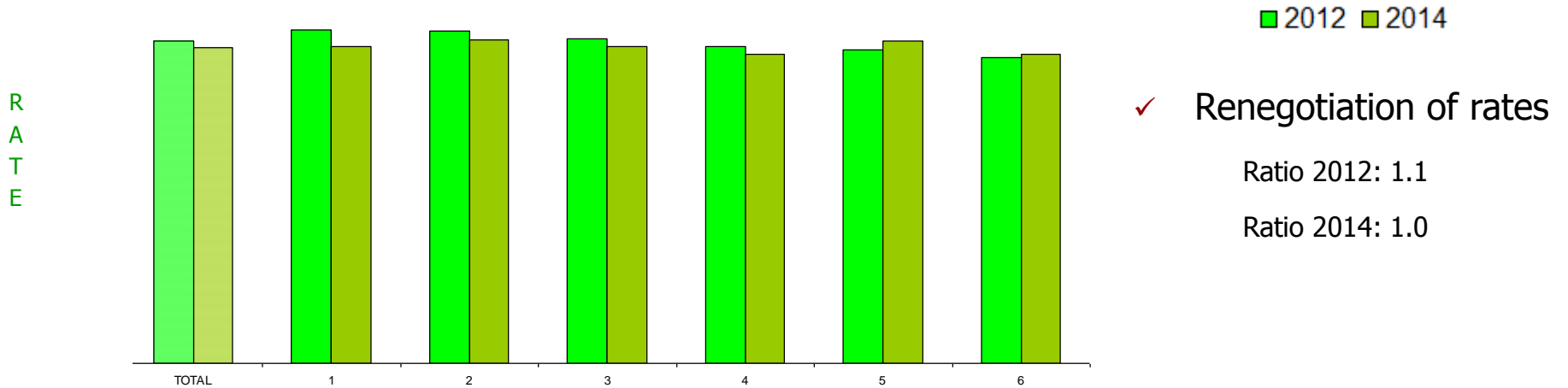
### INPUTS (2013)

- ✓ During 2012 the client implemented a productivity control for maintenance development.
- ✓ An annual productivity SLA for all the providers was established.
- ✓ The client also implemented a productivity and quality providers ranking.
- ✓ Every two months the client presented to the providers their position in the ranking.

# Case studies

## Case Study 3 Controlling large maintenance contracts

### INPUTS (2013)

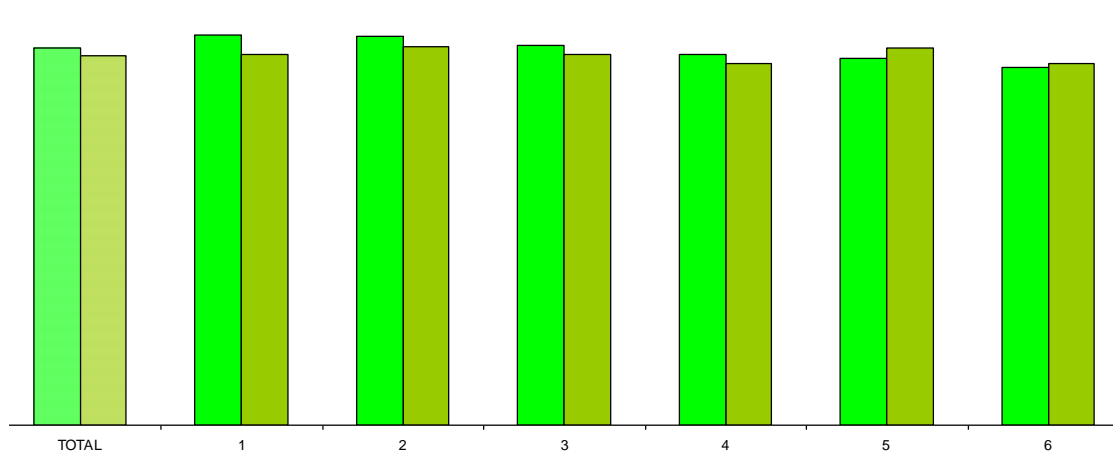


# Case studies

## Case Study 3 Controlling large maintenance contracts

### INPUTS (2013)

R  
A  
T  
E



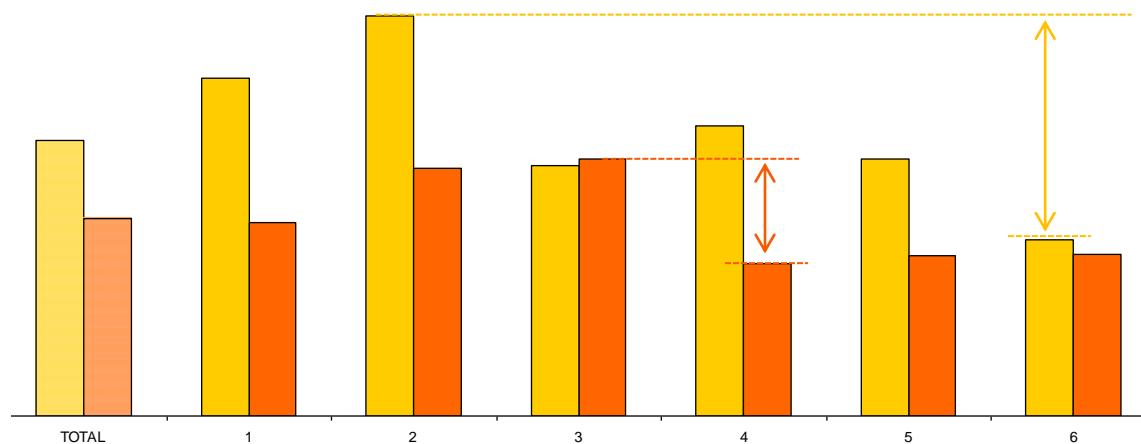
■ 2012 ■ 2014

✓ Renegotiation of rates

Ratio 2012: 1.1

Ratio 2014: 1.0

F  
P  
P  
R  
I  
C  
E



■ 2012 ■ 2014

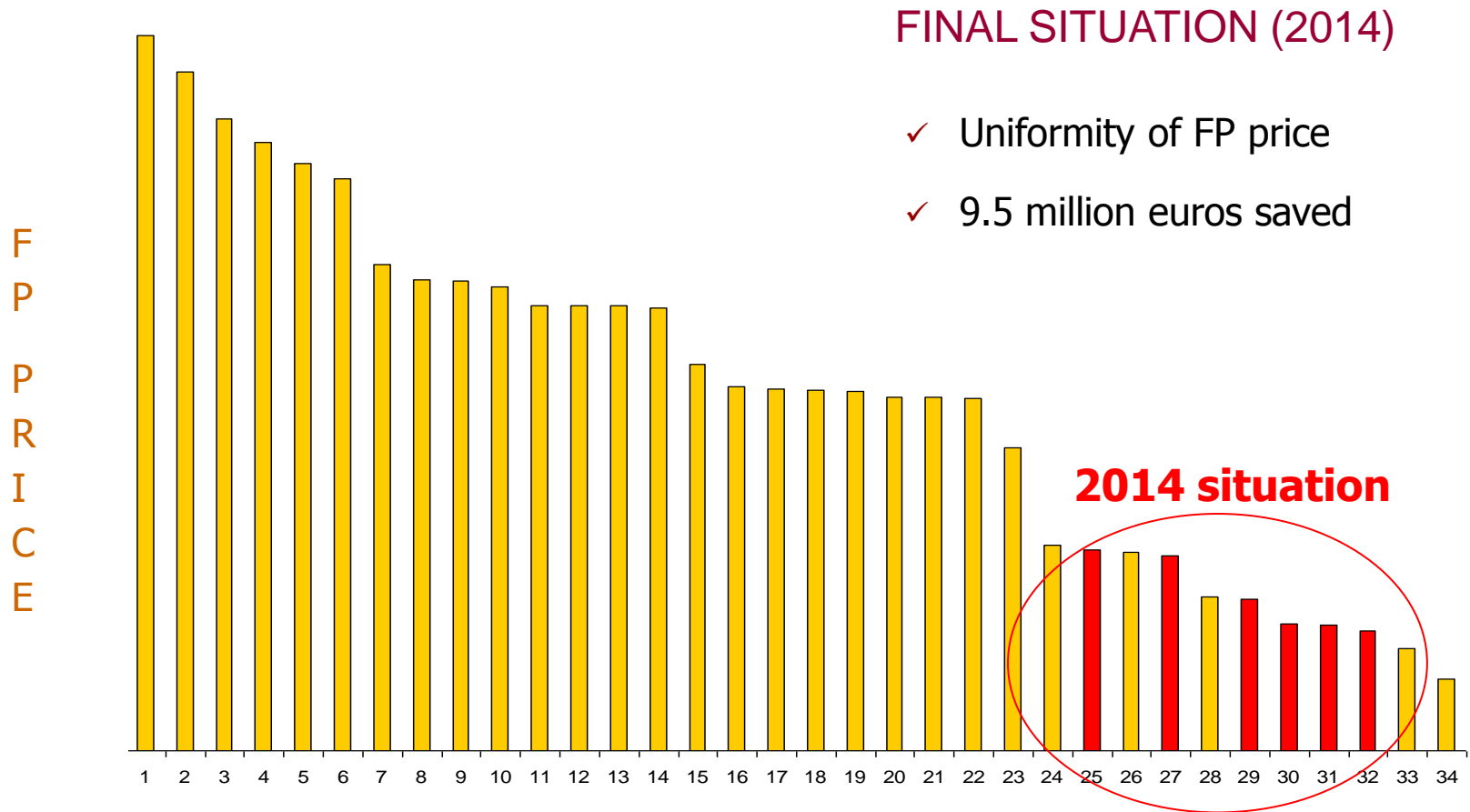
✓ FP cost control

Ratio 2012: 2.3

Ratio 2014: 1.7

# Case studies

## Case Study 3 Controlling large maintenance contracts



# Conclusions

1. It is relatively easy to influence FP price. The main levers are:
  - >>> A centralized estimation control
  - >>> A development productivity control
  - >>> Several providers in competition
2. Working on those key elements the results are much better than working only on the rates:
  - >>> The behavior of the unit cost of production (FP price) is more homogeneous.
  - >>> The cost of the development process can be controlled.
3. Diversification of providers with joint management results in a better uniformity of the FP price.