



Open Solutions  
for the World  
of Automation



Agenda

PI Group

Profibus

Profinet

Wireless

IO-Link

ProfiEnergy

- **Practical steps for a successful Profibus project** **Derek Lane**
- **Introduction to Profinet** **Andy Verwer**
- **Coffee**
- **Using Industrial Ethernet Networks for Profinet** **Alan Bollard**
- **Lunch**
- **Commissioning & Maintenance - Fault Finding Demo** **Andy Verwer**
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- **Profinet Configuration – Incl. Profibus Integration and ProfiSafe** **Peter Brown**
- **Summary and Next Steps** **Bob Squirrell**
- **Close @ 3.30pm**

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# The WRc Group

## Emergency Procedure

If the fire alarm sounds please evacuate using the nearest fire exit which your host will point out to you.

Please report to Assembly Point 4 in the Visitors Car Park

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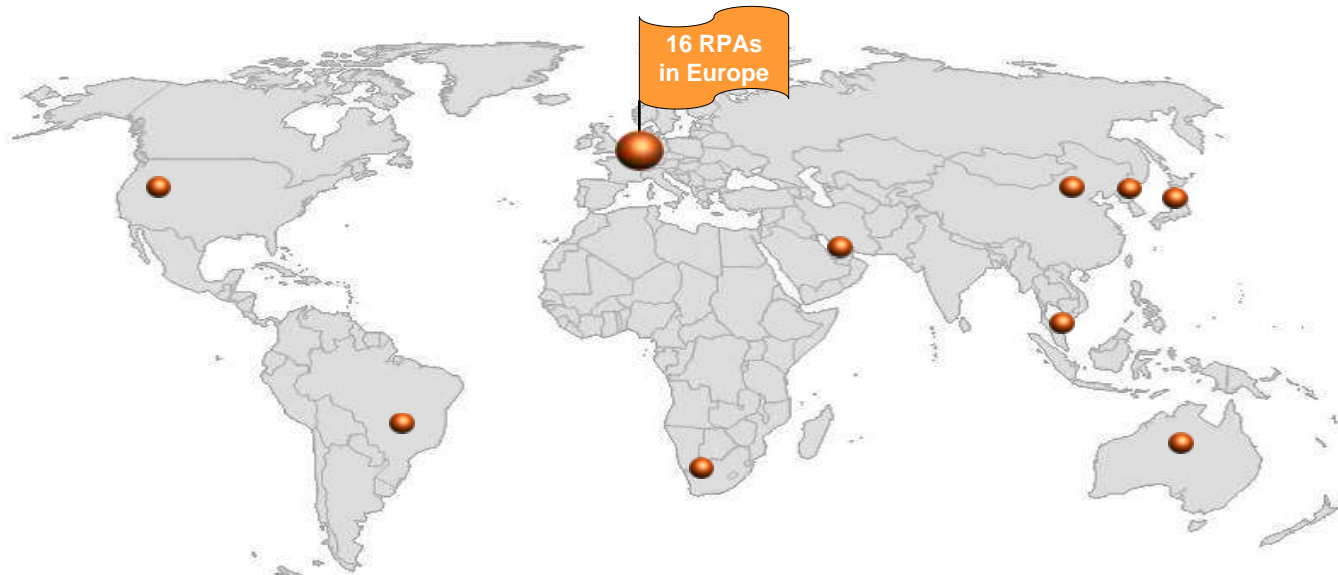
Wireless

IO-Link

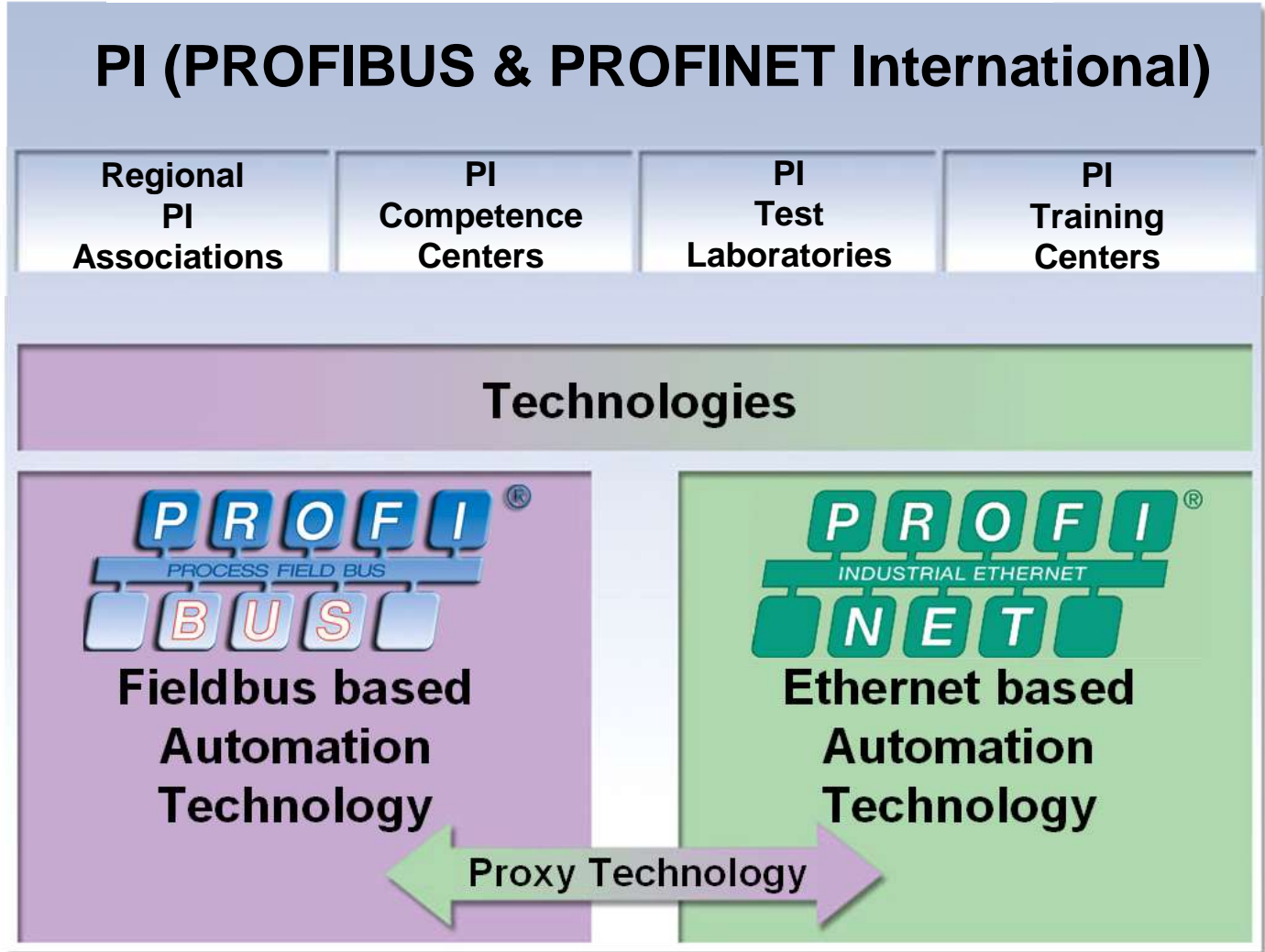
ProfiEnergy

## PROFIBUS & PROFINET International:

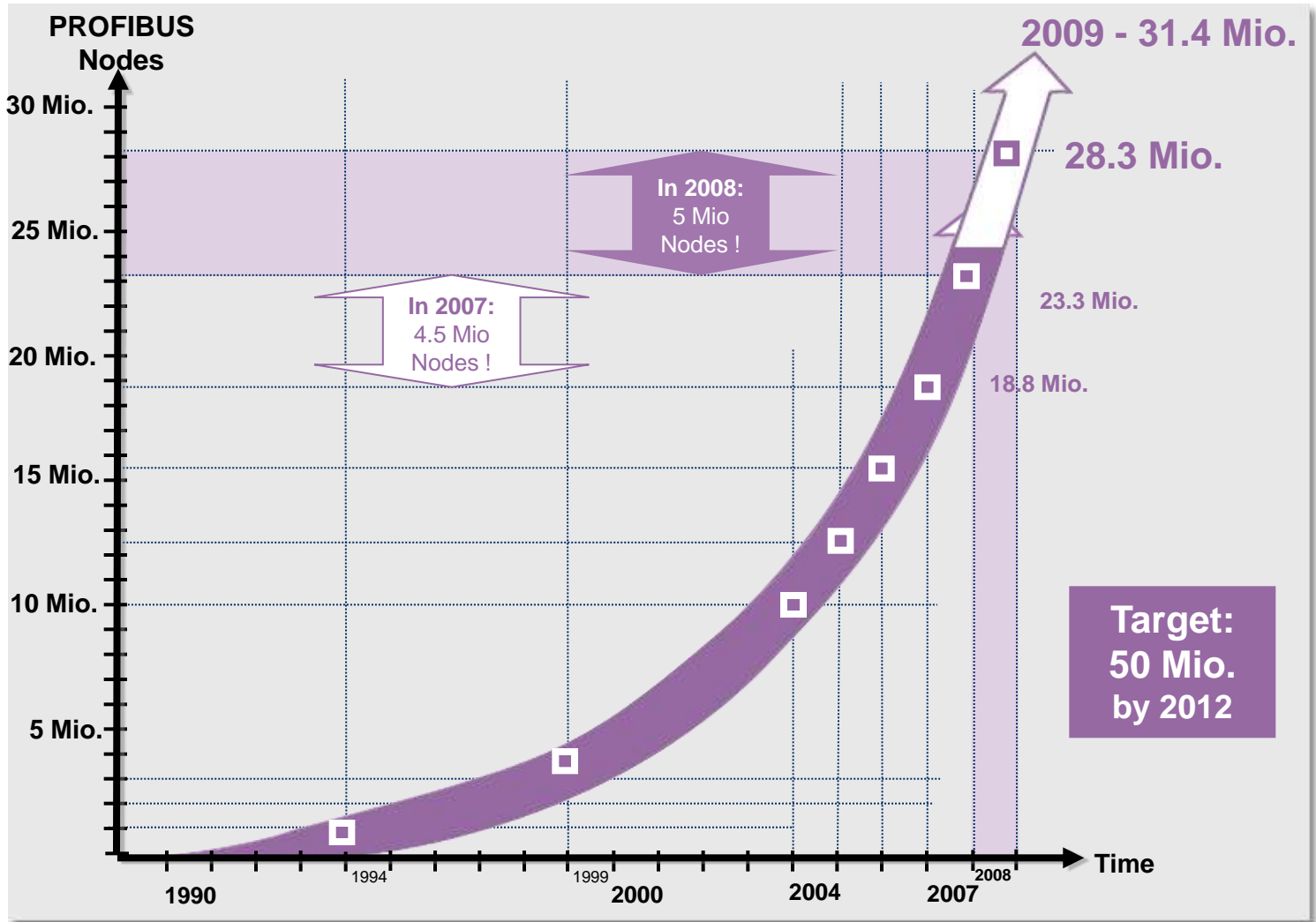
- 25 Regional PI Associations (RPA)
- 37 Competence Centers in 22 countries
- 12 PI Training Centers (PITC) in 9 countries
- 10 Test Labs in 6 countries
- >1,400 member companies worldwide
- >2,500 products
- 2 technologies: **PROFIBUS + PROFINET**



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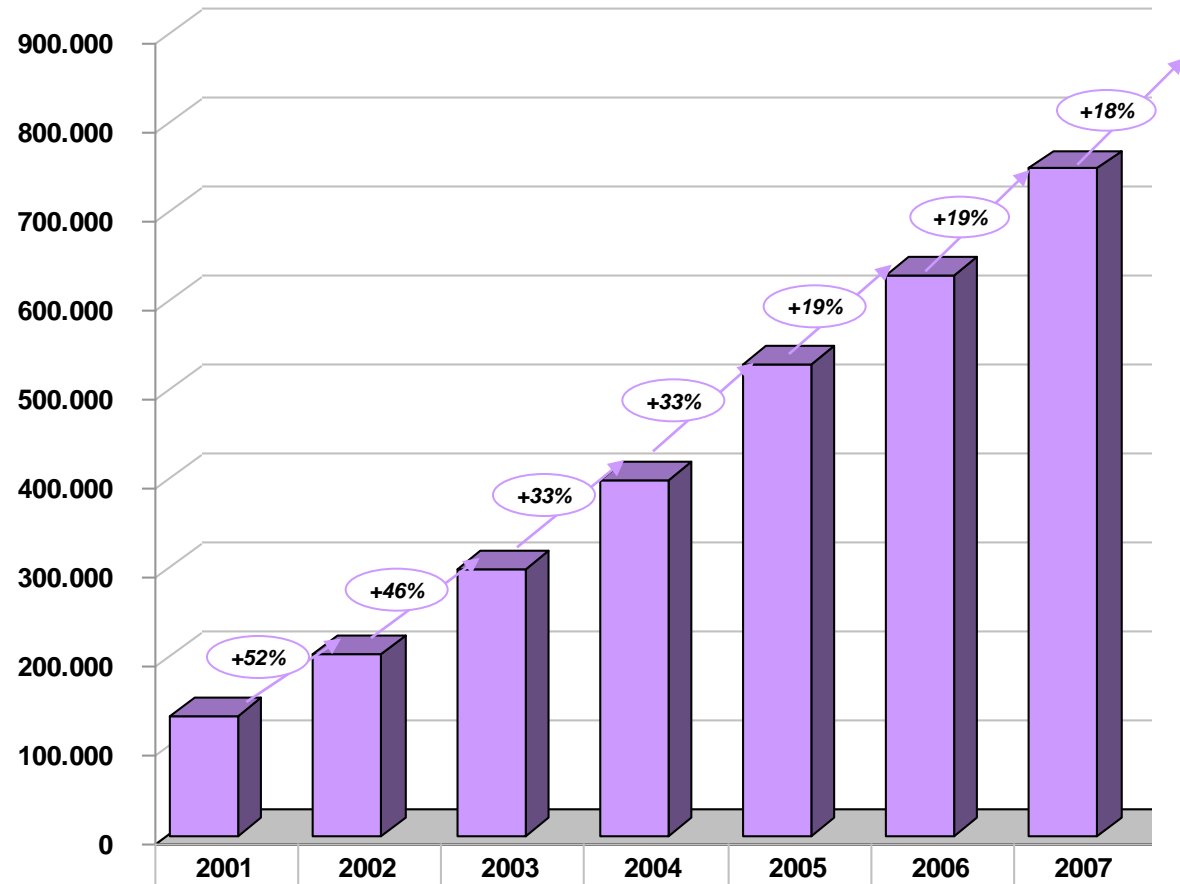


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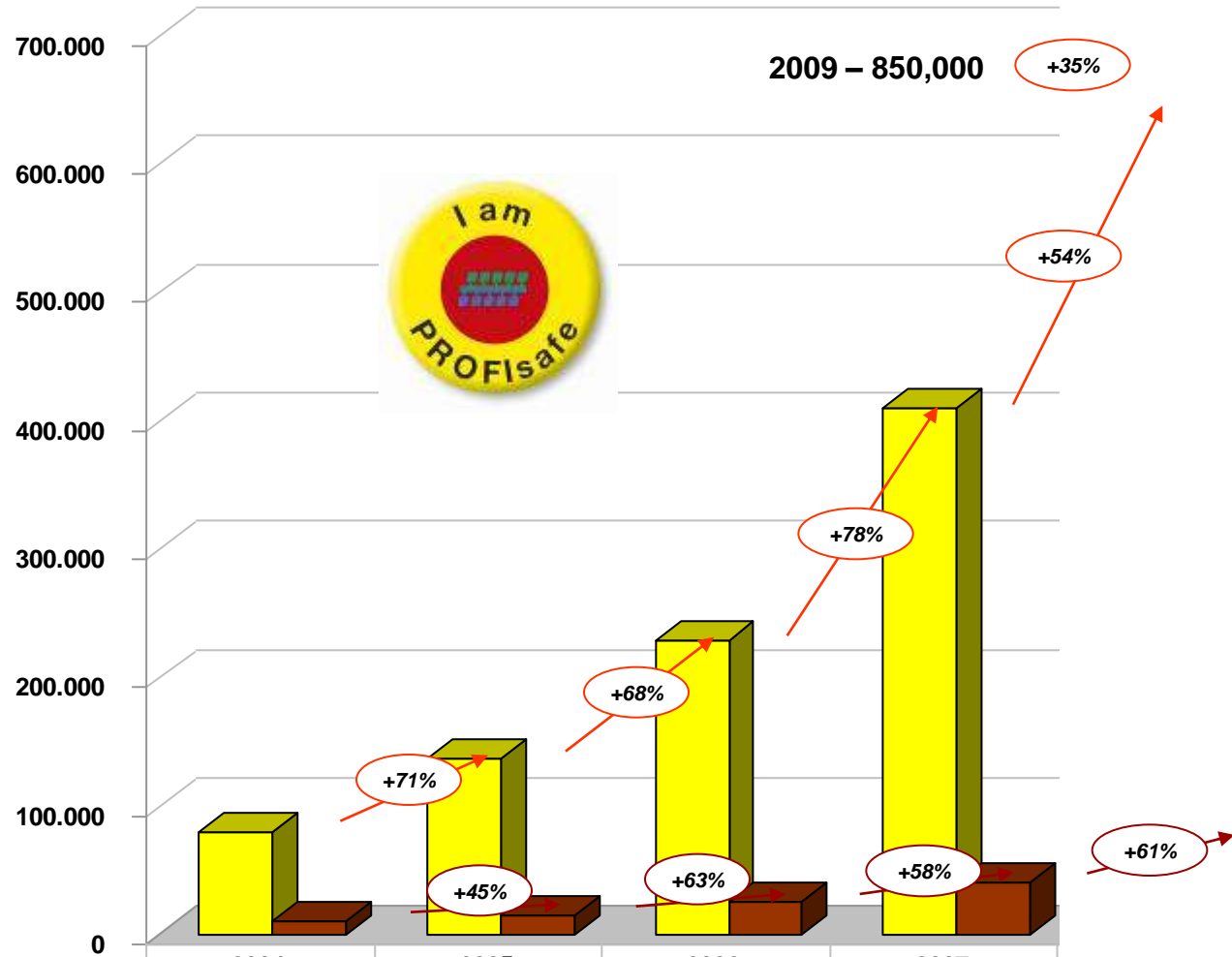
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## PROFIBUS PA Devices 2009 - 5.4 Mio



PROFIBUS PA Devices	135.000	205.000	300.000	400.000	530.000	630.000	750.000
PROFIBUS Nodes in PA			Mio 1.6	Mio 2.1	Mio 2.8	Mio 3.3	Mio 4.0

## PROFIsafe Nodes/Systems



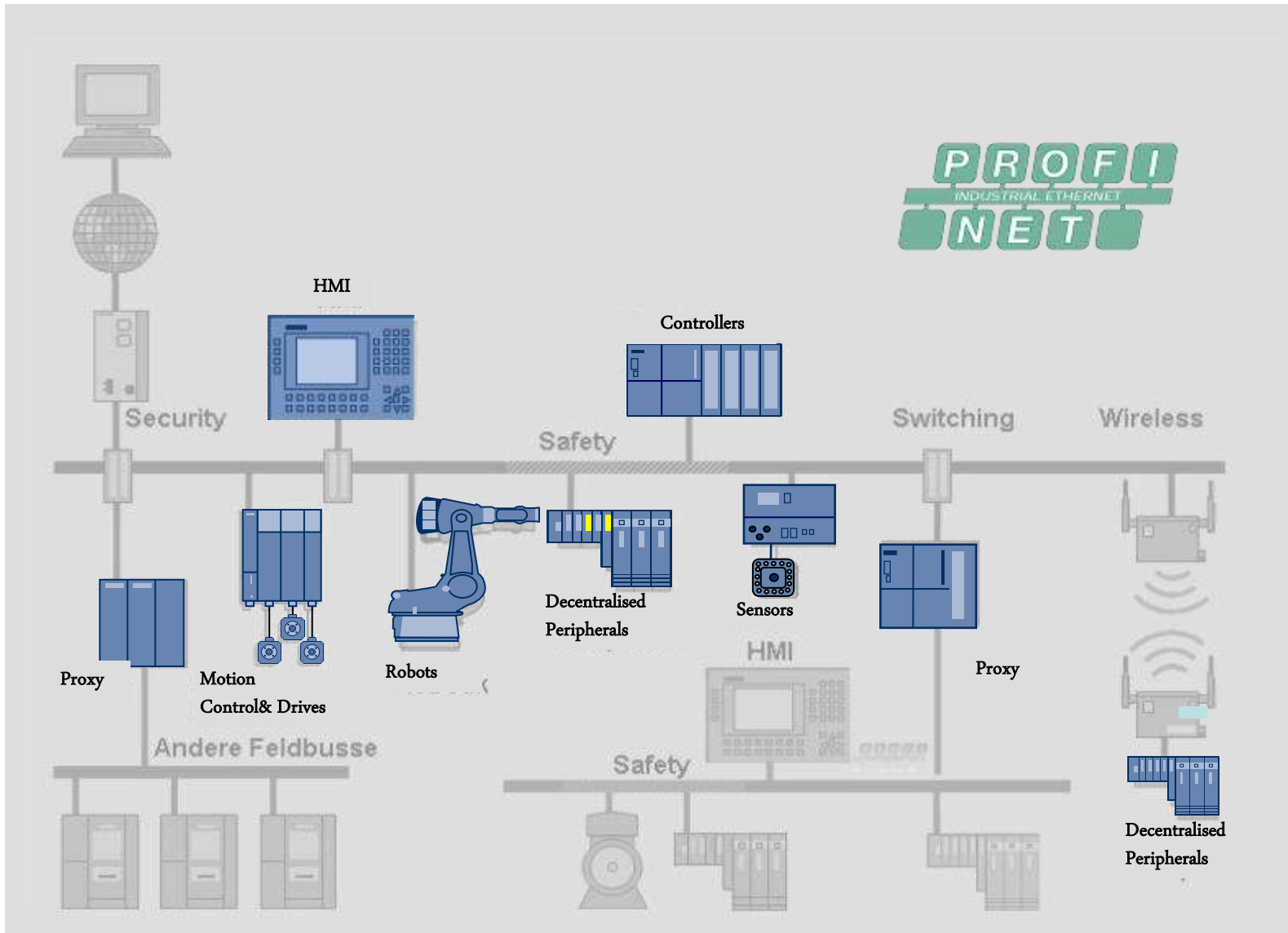
PROFIsafe Nodes	80.000	137.000	230.000	410.000
PROFIsafe Systems	11.000	16.000	26.000	41.000

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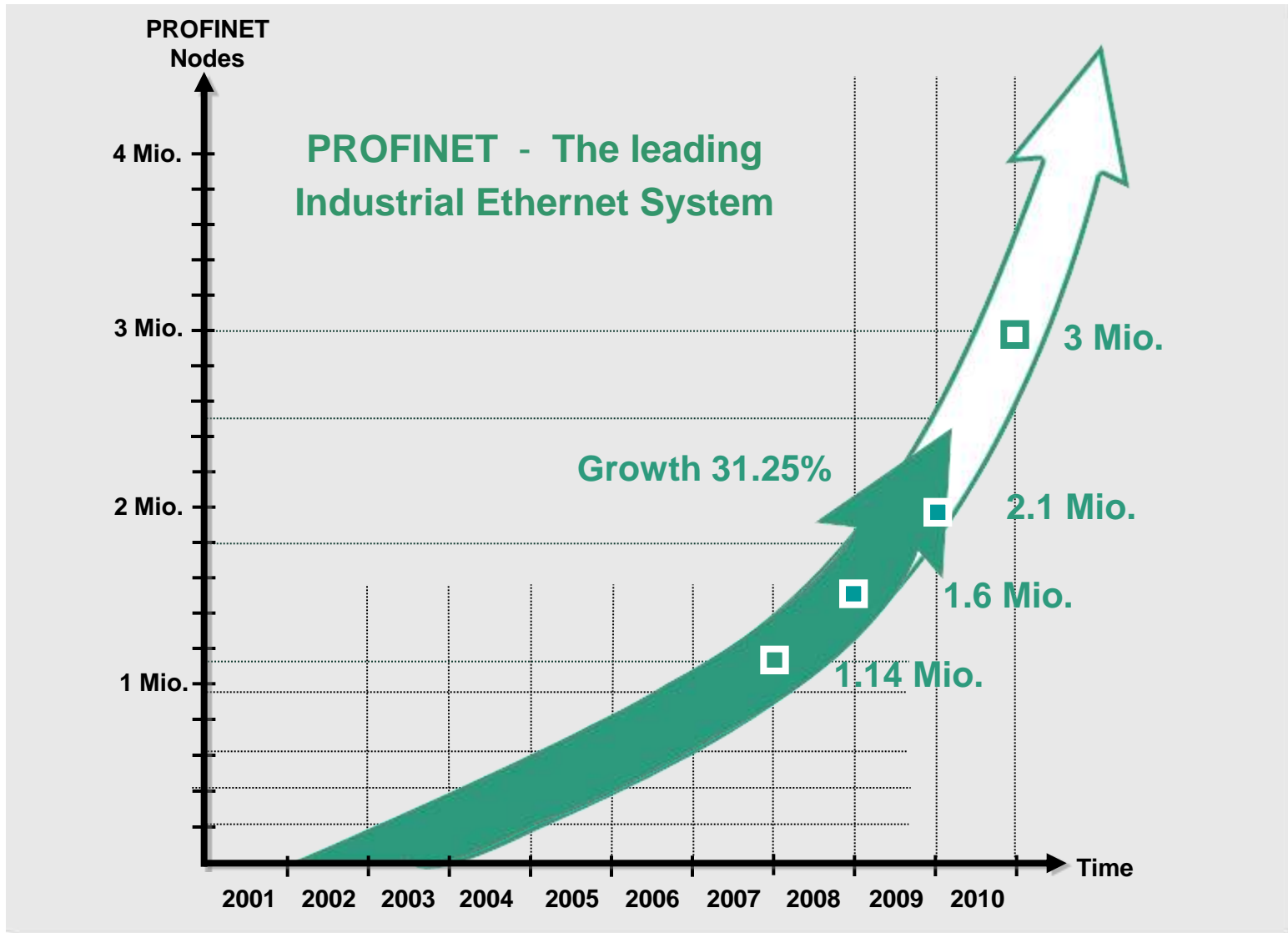


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Practical Aspects of PROFIBUS & PROFINET in Factory Automation

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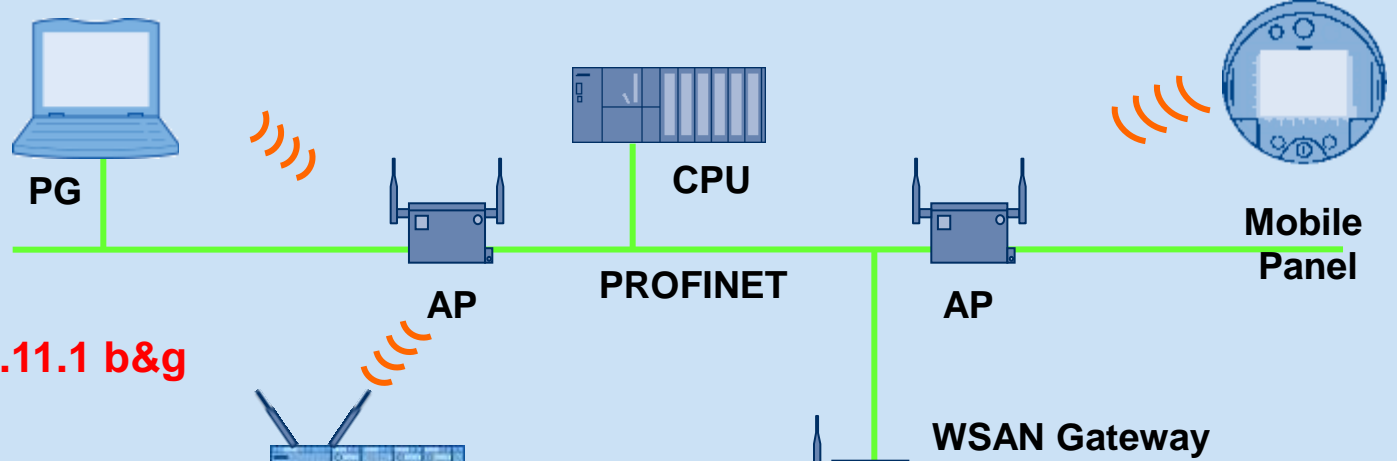


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Practical Aspects of PROFIBUS & PROFINET in Factory Automation

Field Level

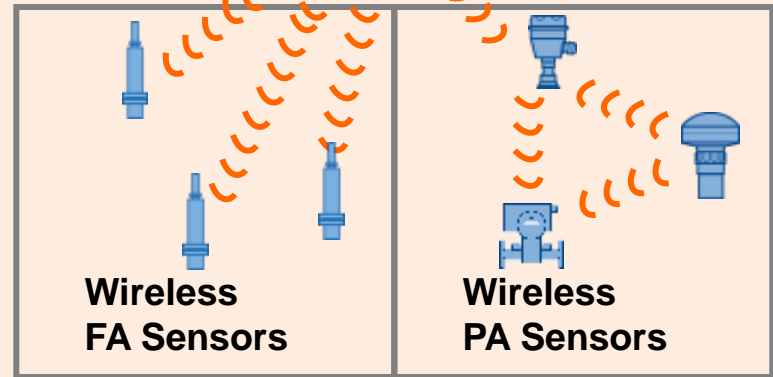


Radio / Protocol:  
Wireless LAN 802.11.1 b&g

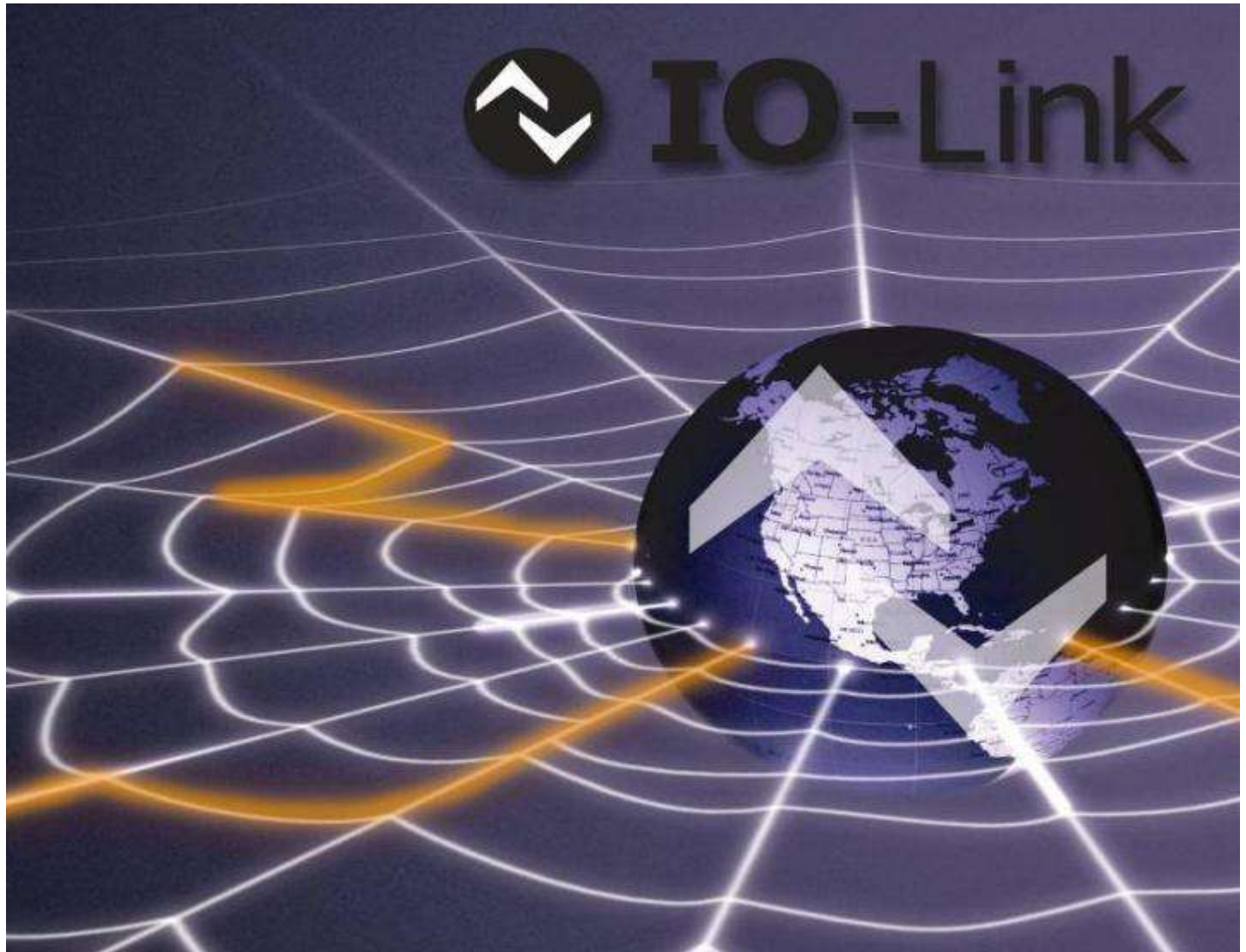
Sensor Level

Remote I/O WLAN

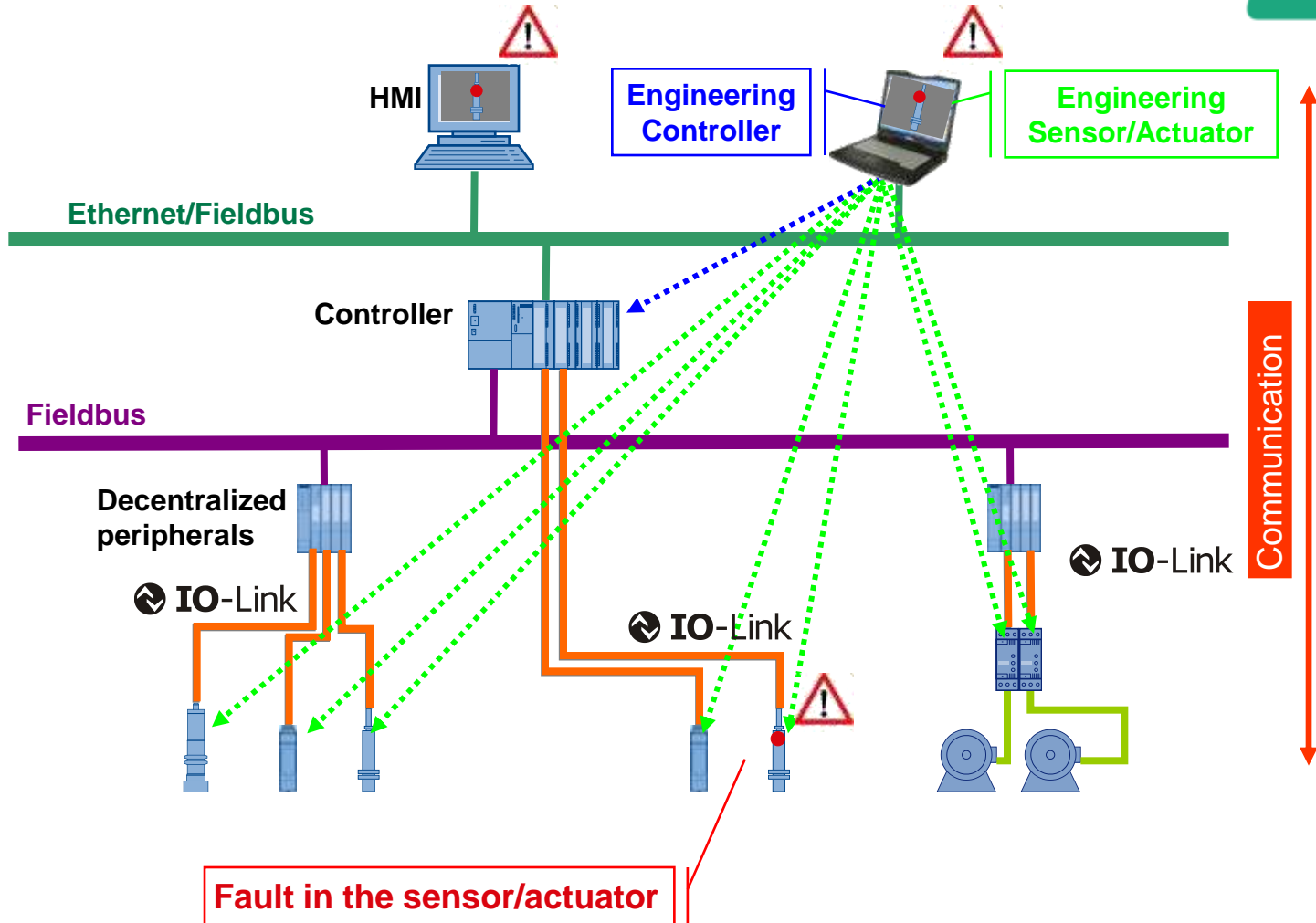
Radio / Protocol:  
PA: 802.15.4 (Wireless HART)  
FA: 802.15.1 (Bluetooth, based on WISA)



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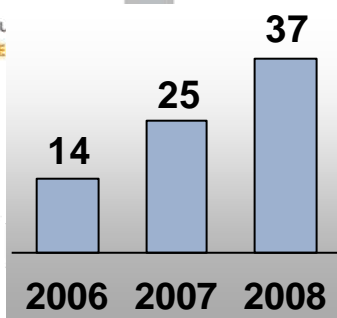
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With IO-Link, the ability to communicate extends over the entire automation environment

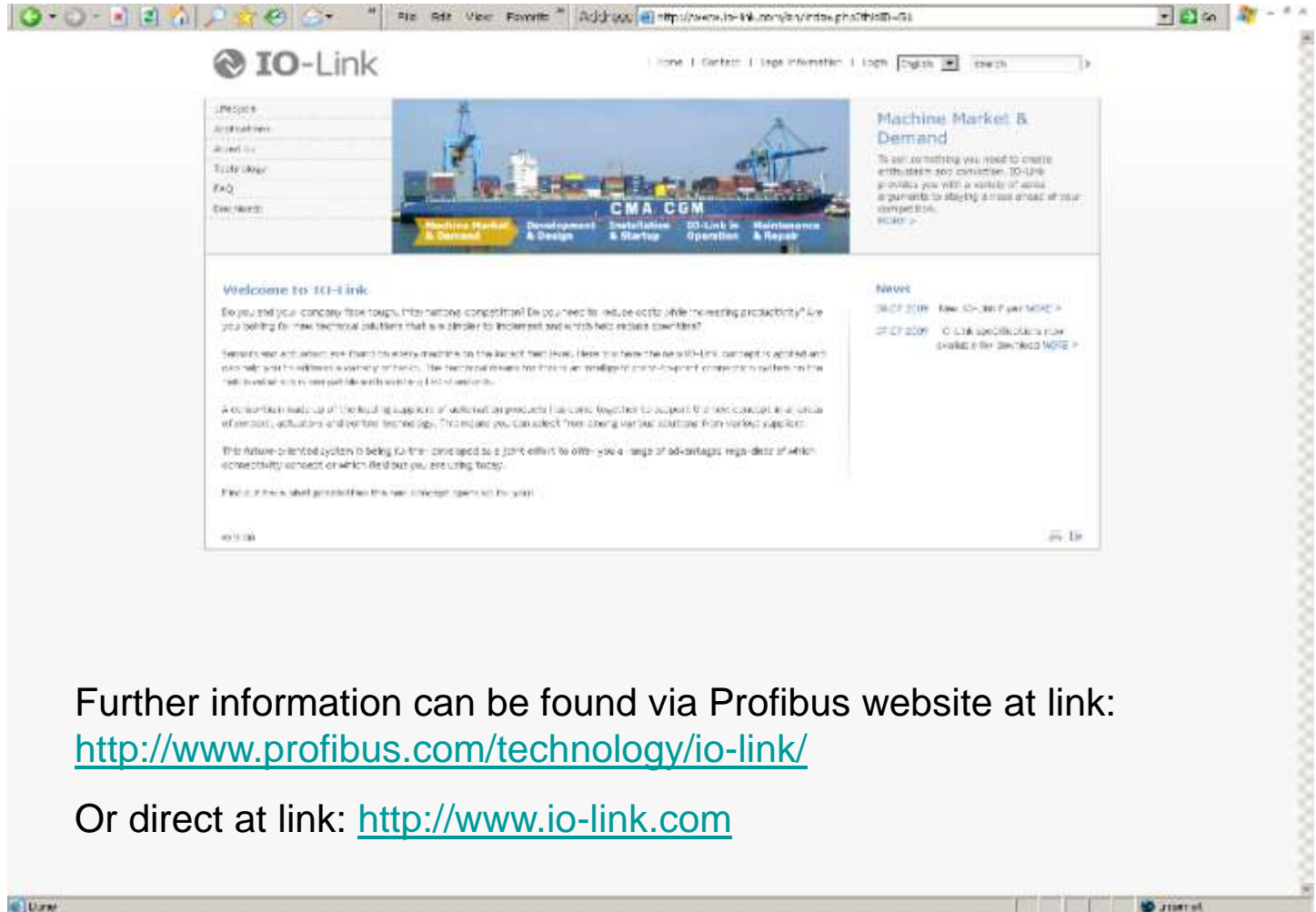
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Membership growth →

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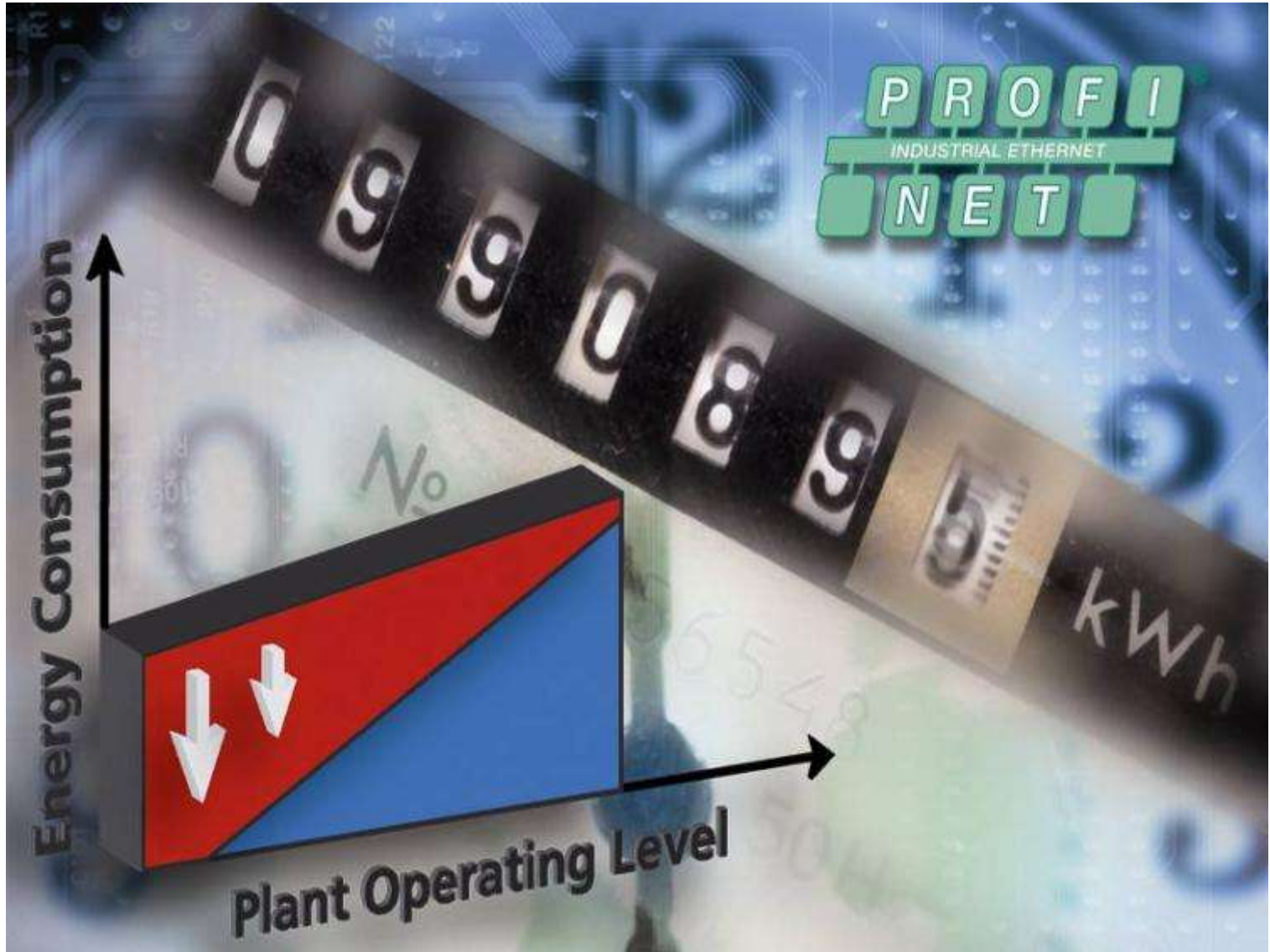


Further information can be found via Profibus website at link:

<http://www.profibus.com/technology/io-link/>

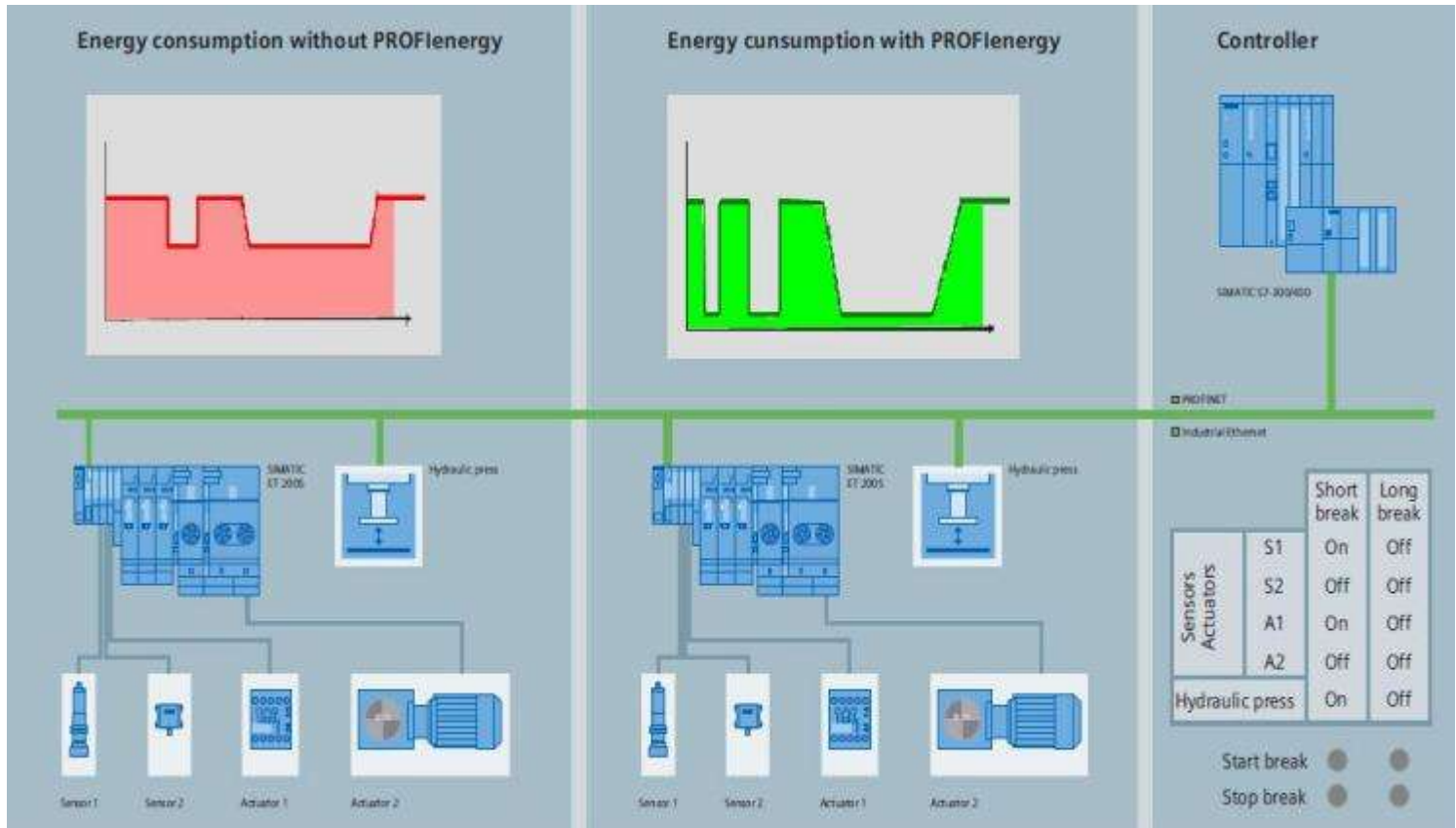
Or direct at link: <http://www.io-link.com>

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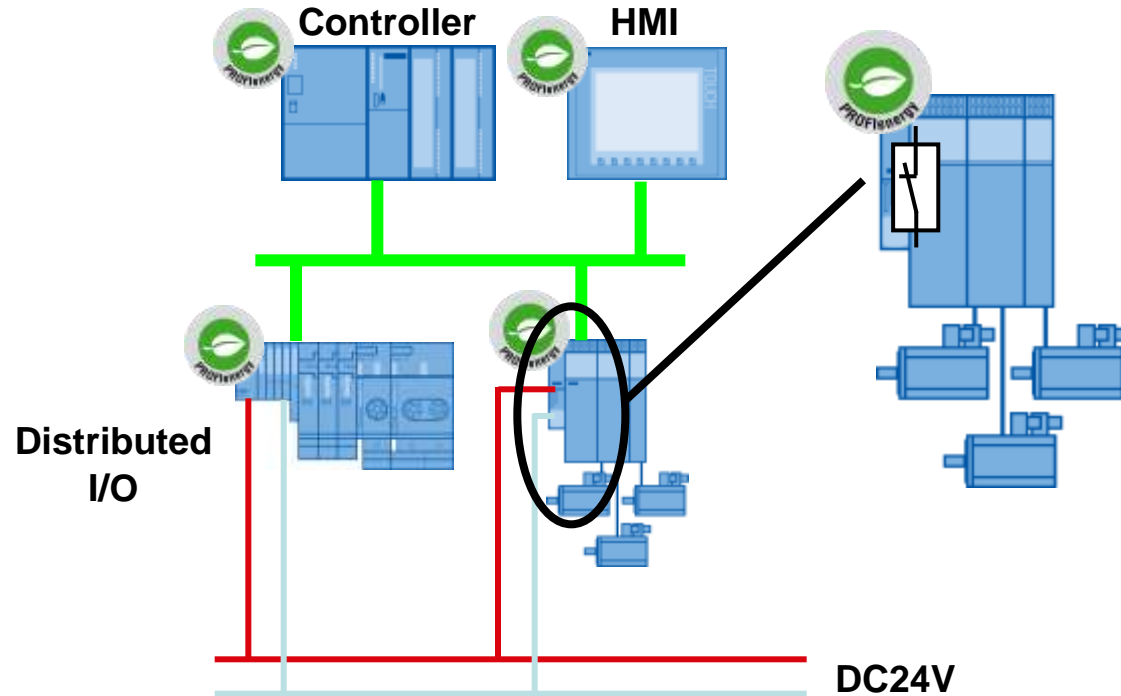




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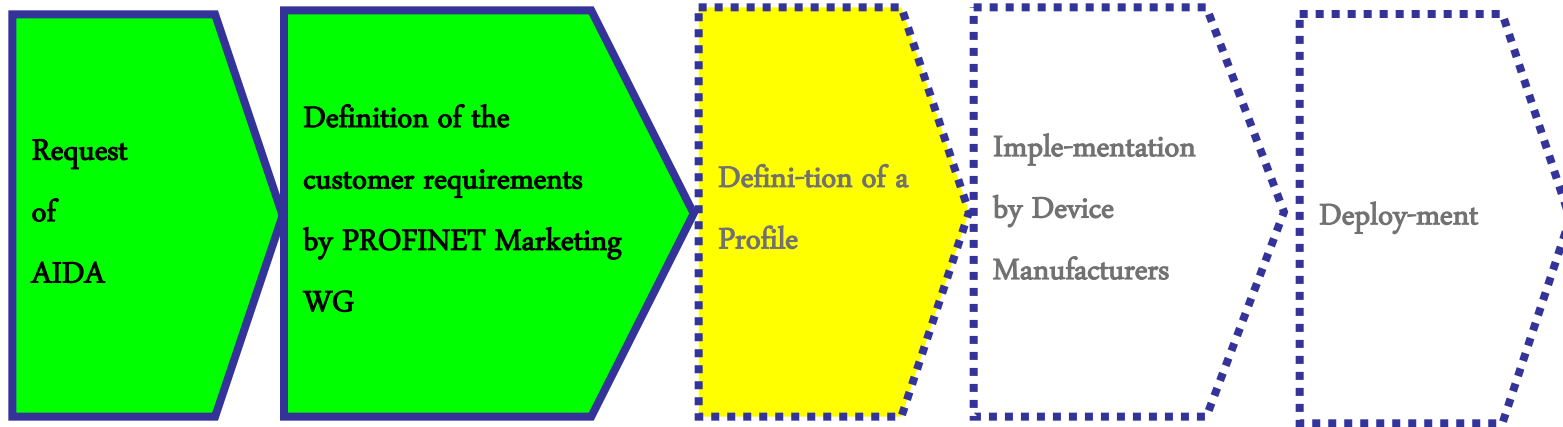


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## Definition:

*PROFenergy is a data interface based on PROFINET which permits coordinated and centrally controlled switching-off of loads in pauses independent of the vendor and device.*



- Fulfillment of the defined Use Cases and sites requirements on the following terms:
  - Use of existing (communications-) mechanisms
  - Independent Implementation
  - Fast Realisation possible



First Release of the Energy Saving Profile “PROFIenergy” available to the market by Q3 of 2010

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## Stratford Manor Hotel

Stratford-upon-Avon,

**Tuesday 29th June &**

**Wednesday 30th June 2010**

Full programme that will lead Users through PROFIBUS and PROFINET from the basic technology through to its use in real world industrial and process applications, plus an update on the latest developments in PROFIBUS and PROFINET. This two-day Conference features application-oriented technical sessions and hands-on workshops presented by technology experts, experienced users and systems builders drawn from a wide variety of application areas.

The event is supported by a free of charge exhibition with interactive displays and technology demonstrations from the UK's PROFIBUS Competence Centre and leading product vendors, trainers, consultants and systems integrators.

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## PROFINET Product Development Course, 5th May @ Manchester Metropolitan University

### Ethernet basics

#### PROFINET basics

- Device model and addressing
- From development to start-up

#### PROFINET: unsynchronised communication

- PROFINET IO, RT classes, and UDP/IP communication
- Data exchange, diagnosis and alarms

#### PROFINET: synchronised communication

- Isochronous real-time

#### Static device description

- Parameterisation with TCI

#### Dynamic device description

- Toll Calling Interface (TCI)

### PROFINET features and service

- Redundancy, topology display
- PROFI-safe, iPar-Server, device replacement without engineering stations

#### Development kit

#### Questions, answers and discussions

#### Other details

Duration: 1 day (9:15 am - 4:30 pm)

Course Rate: £195 per person

Course Date: 5<sup>th</sup> May 2010

Venue: Manchester Metropolitan University

Web: [www.mmu.ac.uk/profibus](http://www.mmu.ac.uk/profibus)

Booking: [admin@uk.profibus.com](mailto:admin@uk.profibus.com)

The details are online at:

[http://www.sci-eng.mmu.ac.uk/ascent/training\\_courses/profinet\\_product\\_development/](http://www.sci-eng.mmu.ac.uk/ascent/training_courses/profinet_product_development/)

For more information please see Xiu Ji

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*The Industrial Communications Community  
Delivering Greater Enterprise Advantage*



*Leading Fieldbus*



*Global Organization*



*Industrial Ethernet*

*Open Solutions for the World of Automation*

[www.profibus.co.uk](http://www.profibus.co.uk)

[www.profibus.com](http://www.profibus.com)

[www.profinet.com](http://www.profinet.com)

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