



# Integration of Process Analytics and Control into Process Intensification Plant

*Establishing the issues facing  
industrial uptake of PI Plant*

**Presented by**  
**Andrew Green**  
**BHR Solutions**

**BHR Solutions**

*The Fluid Engineering Centre*

---

# Objectives

## Through workshops to:

- ◆ **Raise industrial awareness of the opportunities offered by PI plant coupled with an appreciation of the business and technical risks to achieve industrial 'pull through'.**
- ◆ **Raise technology provider awareness of business needs and barriers to take up new technologies.**
- ◆ **Prepare a technology routemap that integrates the underpinning technologies, identify the roles for the key providers and establishes a pathway for the implementation of PI plant.**



# Format of the First Workshop

## Small working group

- ◆ **Identify technical issues for ‘PI Plant’:**
  - Measurement techniques matched to different reactions and reactants.
  - Development of on-line analytical equipment, sampling systems and rapid data processing.
  - Control strategies for process optimisation.
  - Reach agreement on what we can do now and what the remaining challenges are.
- ◆ **Identify the key themes that determine business uptake, including non-technical factors like safety, legislation, TTM.**
- ◆ **Offline, prepare focused presentations and Q&A to address the common concerns**



# Format of the Second Workshop

## Using the results from the first workshop:

- ◆ Present a series of structured Q&A to the issues identified previously
- ◆ Proposing solutions to them and seek opinion and possibly consensus from the delegates.
- ◆ Raise business awareness of the opportunities and risks with these options
- ◆ If possible agree an action plan for resolving the main barriers to business uptake.



# What next?

- ◆ **The project partners (BHR, Protensive, David Reay, Newcastle Univ, Strathclyde Univ, UCL) will meet to finalise the format of workshops**
- ◆ **Over the next two months, finalise venues, dates, etc and mail invitations to industry.**
- ◆ **Hold meetings at dates TBA and issue results to those interested.**
- ◆ **If you would like to:**
  - **take part**
  - **find out about the results****then let me know.**

