

Heat Pump Training and Apprenticeships

Prepared for: GSHPA Conference

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Content

- The sector perspective
- National Occupational Standards
- Qualifications and Credit Framework Developments
- Encouraging engagement and removing confusion

The sector perspective

The building services engineering sector views skills and competence for heat pumps and other emerging technologies as:

- an extension of scope for existing sector occupations (i.e. plumber, heating installer)
- being Level 3/4 competences
- specialist skills and competences that require a threshold of core competences

Environmental Technology NOS (Operative)

NOS Units		Environmental Technology Systems
EVTS 1	Plan for EVT Systems, Equipment and Components	Solar Water and Heating Underfloor Heating Micro CHP Ground Source Heat Pumps Air Source Heat Pumps Biomass/Biomass Fuels (Liquid) Rainwater Harvesting Grey Water Mech. Heat Recovery Ventilation Photovoltaics for Microgeneration Micro Wind Energy Micro Hydro Gen. Schemes Fuel Cell Technology <u><i>Units may be contextualised for one or more of the above systems</i></u>
EVTS 2	Install EVT Systems, Equipment and Components	
EVTS 3	Test EVT Systems, Equipment and Components	
EVTS 4	Commission EVT Systems, Equipment and Components	
EVTS 5	Inspect EVT Systems, Equipment and Components	
EVTS 6	Diagnose Faults in EVT Systems, Equipment and Components	
EVTS 7	Rectify Faults EVT Systems, Equipment and Components	
EVTS 8	Service and maintain EVT Systems, Equipment and Components	

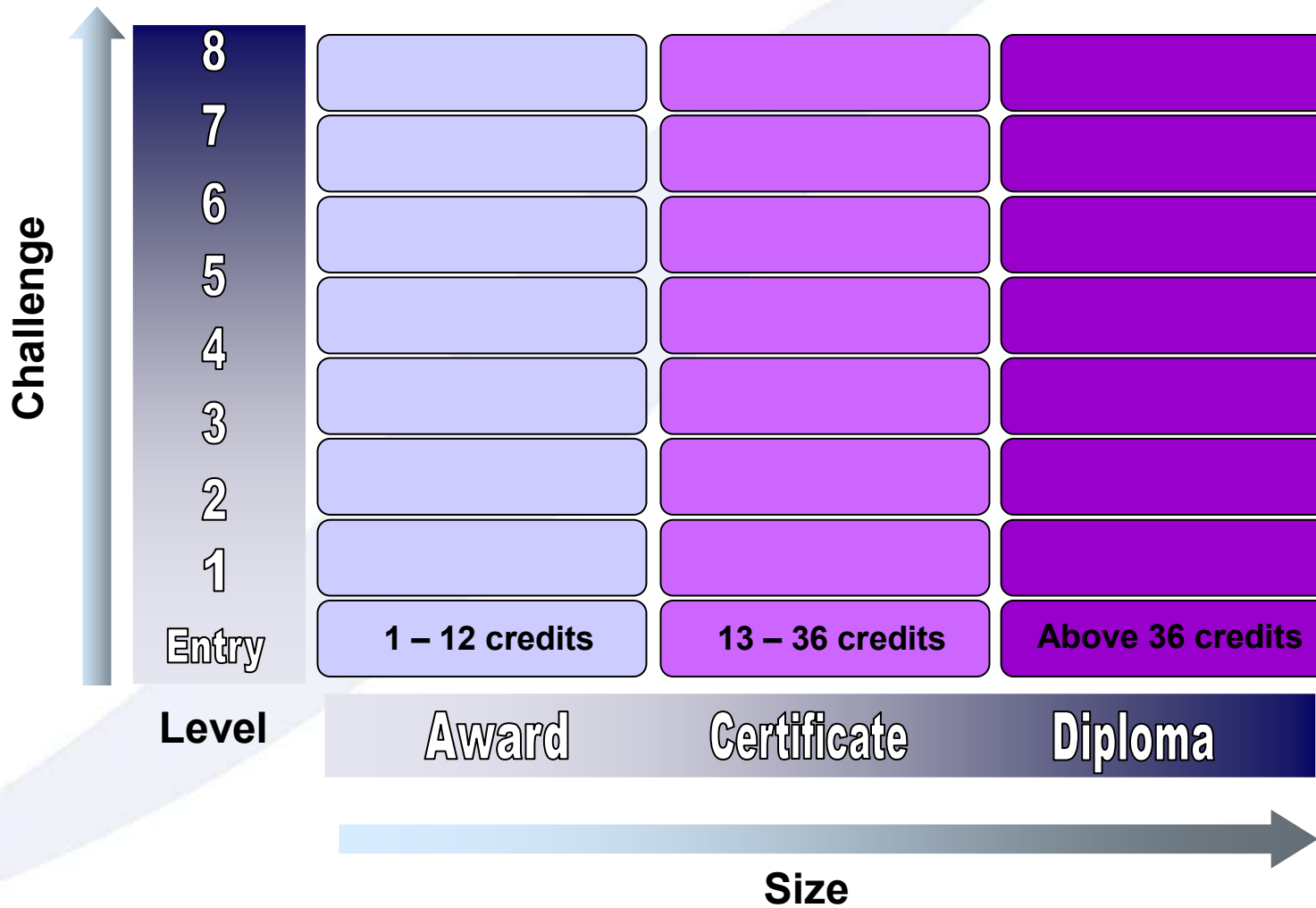
Environmental Technology NOS (Higher)

NOS Units		Environmental Technology (ET) Systems
EVTS 9	Determine Environmental Legislation and Working Practice Requirements for ET Systems	Solar Water and Heating
EVTS 10	Develop ET System Design Solutions	Underfloor Heating
EVTS 11	Evaluate and Advise on ET System Designs	Micro CHP
EVTS 12	Prepare and Agree ET System Designs	Ground Source Heat Pumps
EVTS 13	Plan and Implement Work Methods and Resources to Achieve ET Systems Installation Requirements	Air Source Heat Pumps
EVTS 14	Implement Works to Achieve ET Systems Installation	Biomass/Biomass Fuels (Liquid)
EVTS 15	Commission and Handover ET Systems after Installation	Rainwater Harvesting
EVTS 16	Manage Installation, Servicing and Maintenance of ET Systems	Grey Water
		Mech. Heat Recovery Ventilation
		Photovoltaics for Microgeneration
		Micro Wind Energy
		Micro Hydro Gen. Schemes
		Fuel Cell Technology
		<u>Units may be contextualised for one or more of the above systems</u>

Qualifications and Credit Framework (QCF)

- Due to replace the National Qualifications Framework (NQF) from January 2011
- A new **framework for recognising and accrediting qualifications** in England, Wales and Northern Ireland
- The framework is at the heart of a major reform of the vocational qualifications system designed to make the whole system **simpler to understand and use** and **more inclusive**
- The intention is to make both the system and the qualifications offered **far more relevant to the needs of employers and more flexible and accessible for learners**

Qualifications and Credit Framework (QCF)

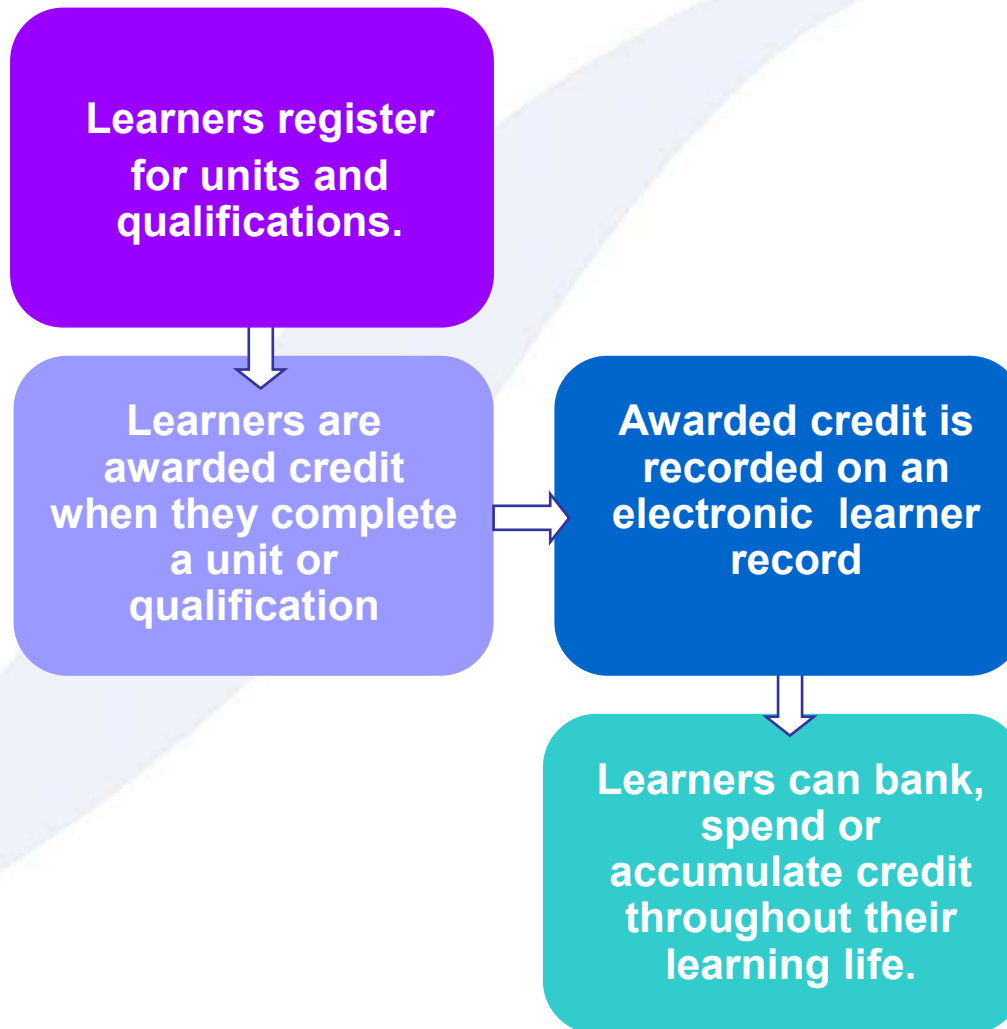


QCF: Operating Principles



*Credit Value: 1 Credit = 10 notional hours learning

QCF: Operating Principles



QCF – Proposed Environmental Units

Legislative requirements, working principles and application for env. tech. systems in BSE (L3)

Know how to plan and prepare for, install, test, configure, commission and handover <insert tech.> systems (L3)

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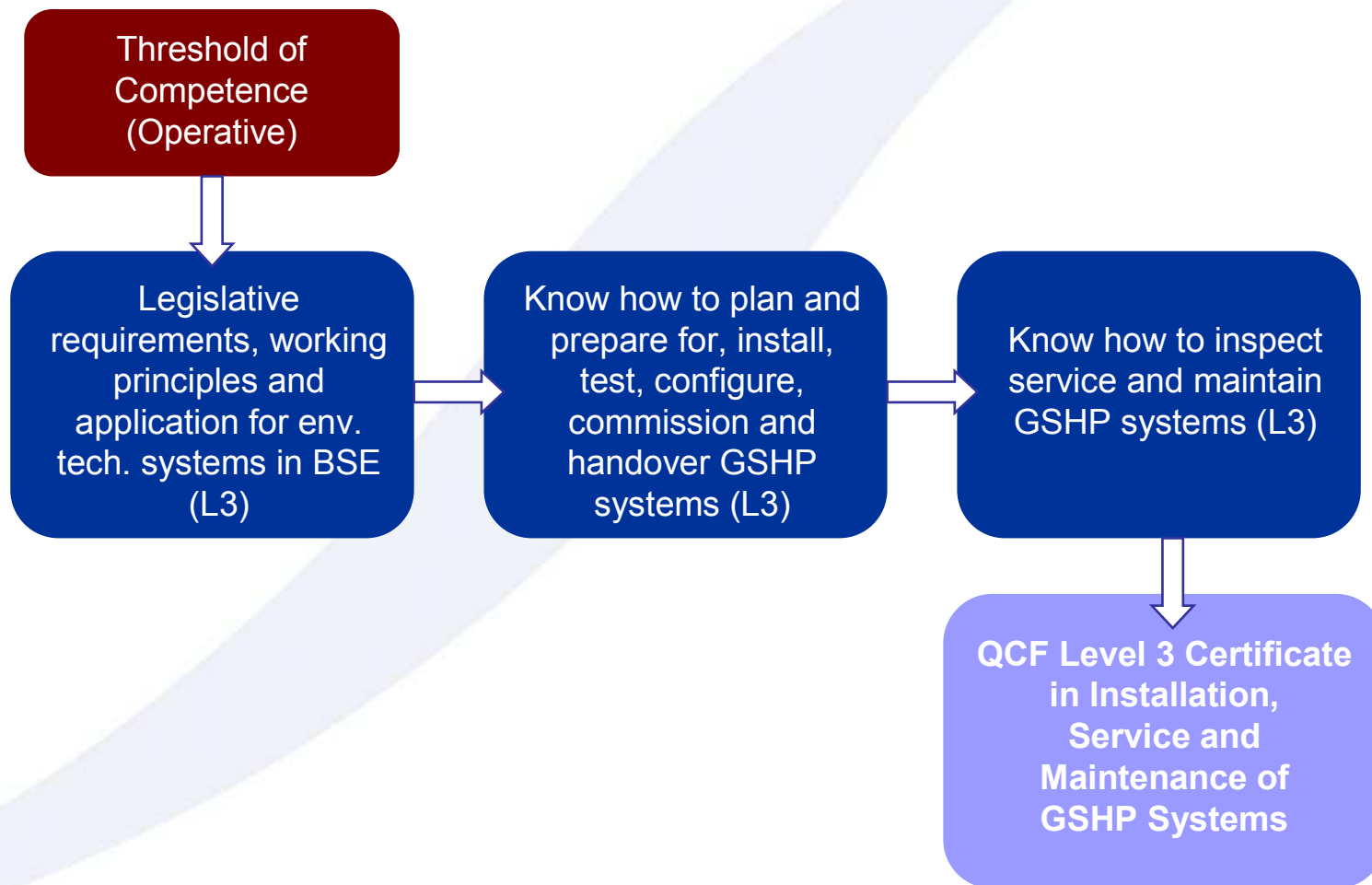
Know how to inspect service and maintain <insert technology> systems (L3)

Inspect service and maintain <insert technology> systems (L3)

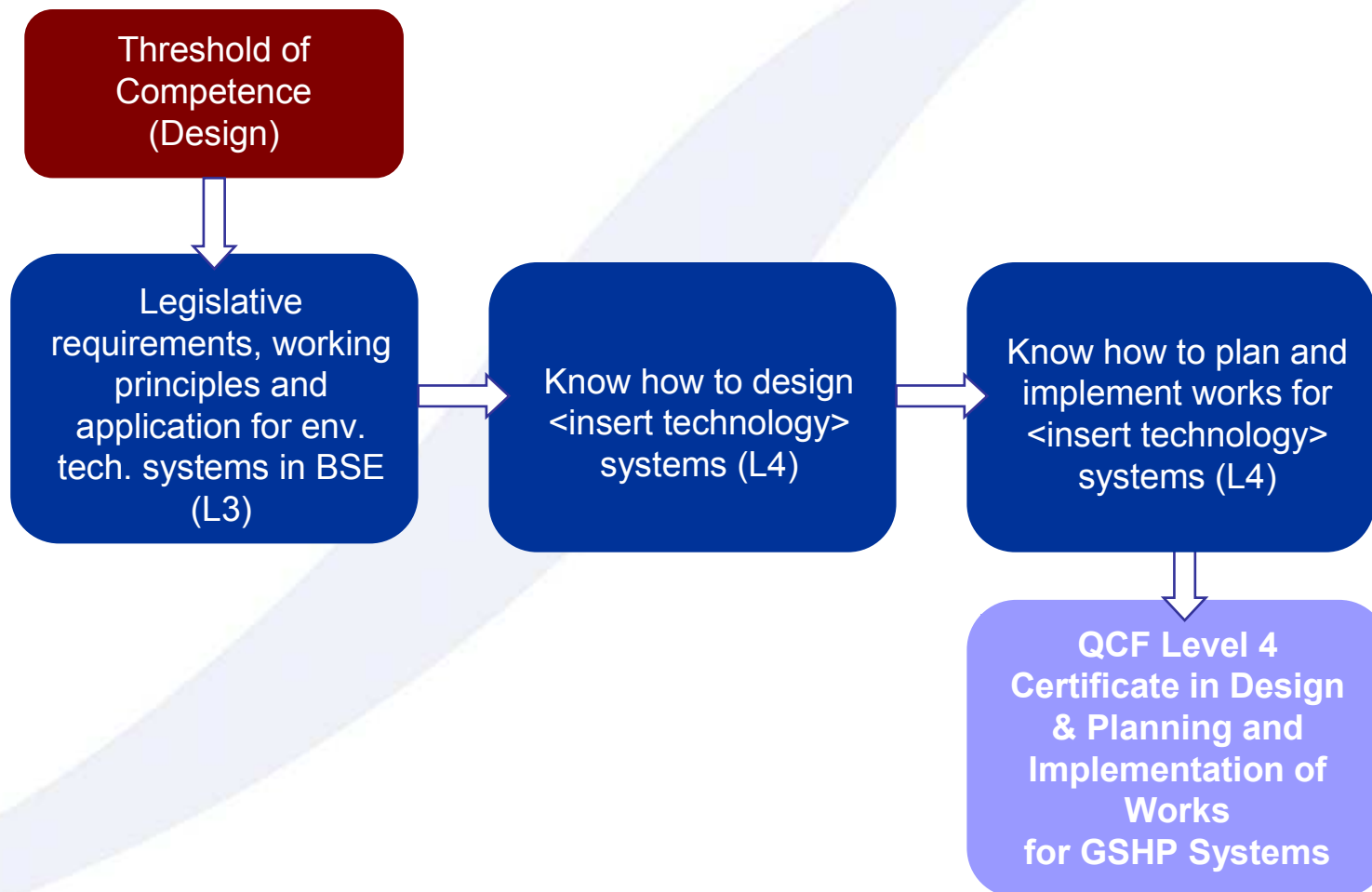
Know how to design <insert technology> systems (L4)

Know how to plan and implement works for <insert technology> systems (L4)

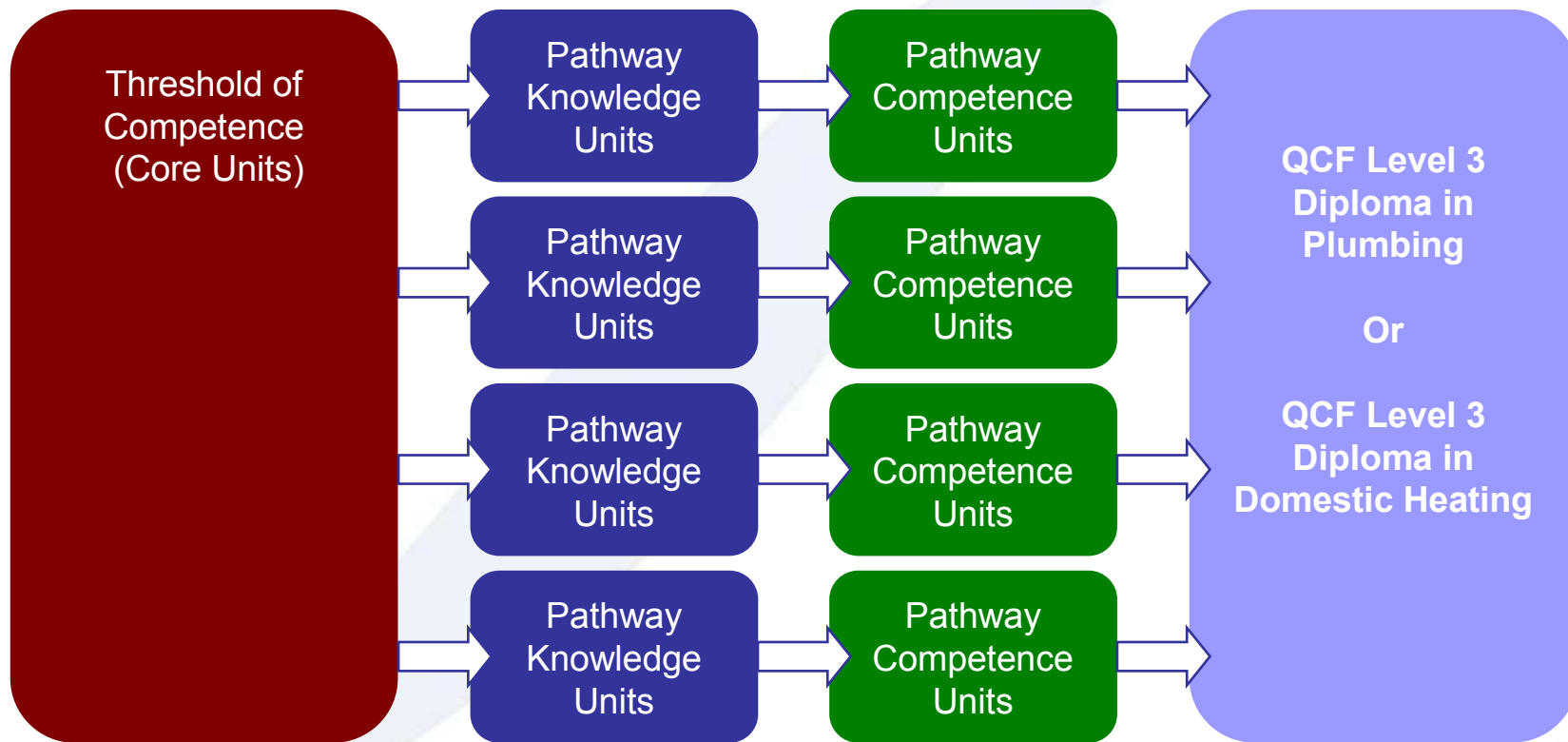
QCF – Possible CPD Route for Operatives



QCF – Possible CPD Route for Designers



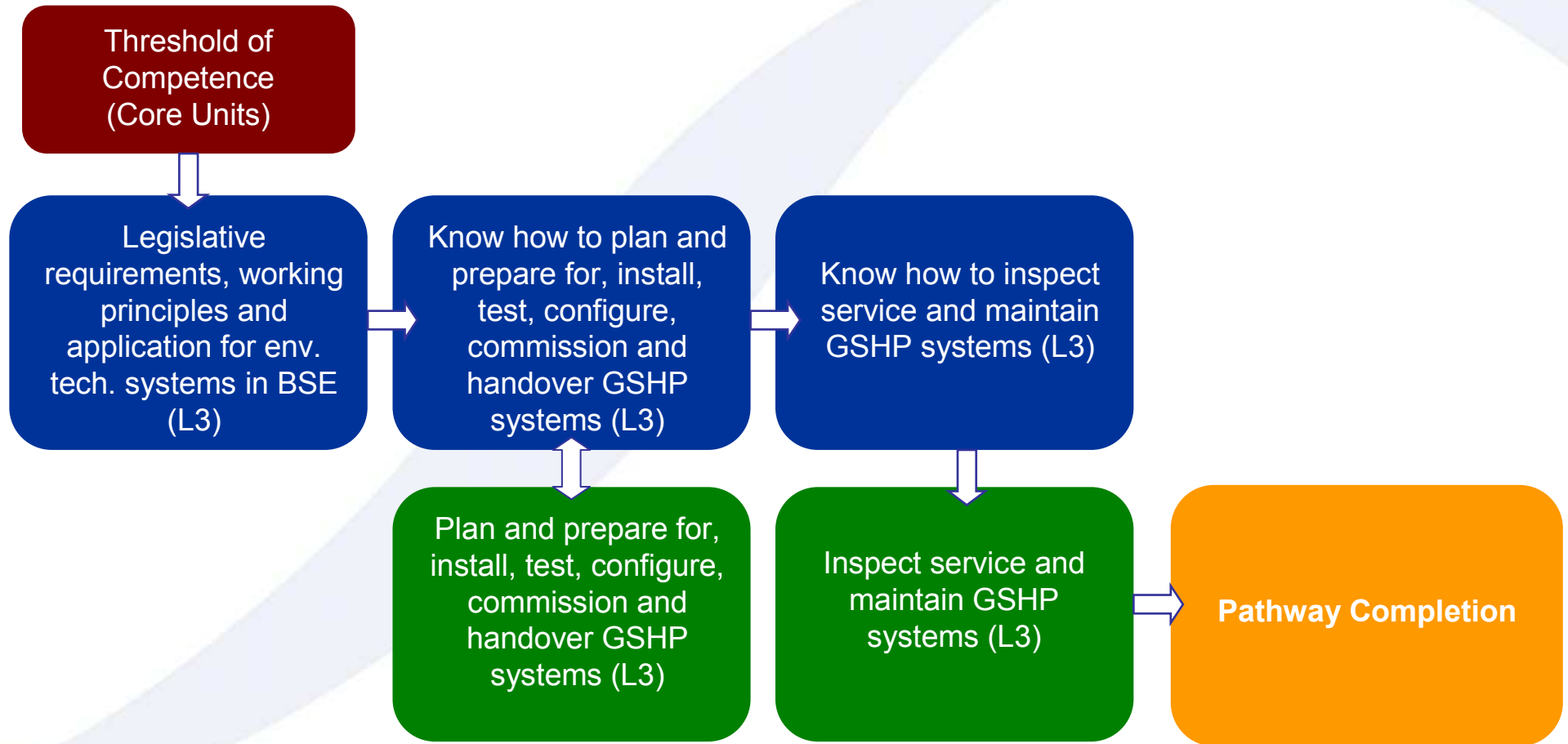
QCF – Possible Pathway Route (Within a Competence Based Qualification)



Pathways = Gas, Oil, Solid Fuel, Environmental Technologies

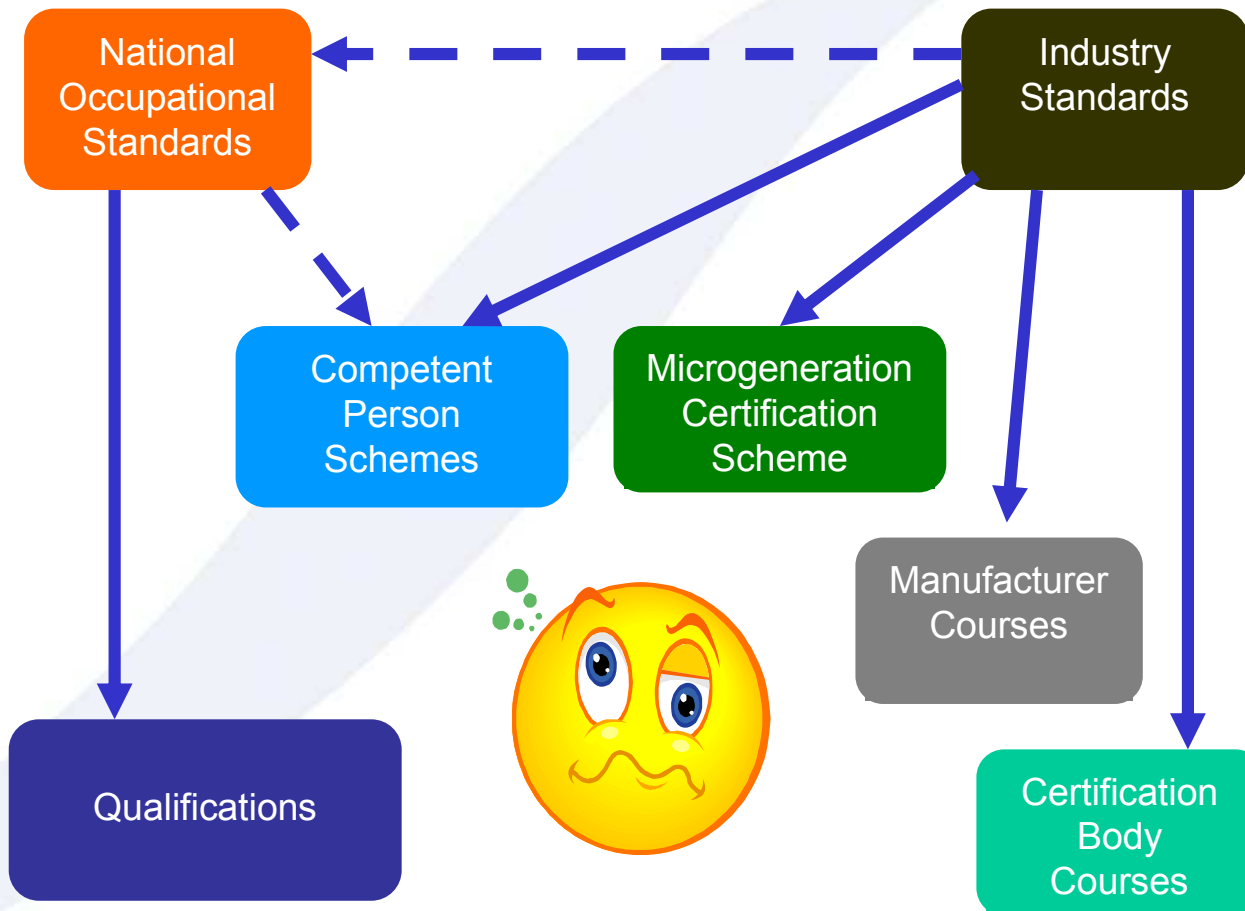
To be available within and outside of apprenticeship frameworks

QCF – Possible Pathway Route (Within a Competence Based Qualification)

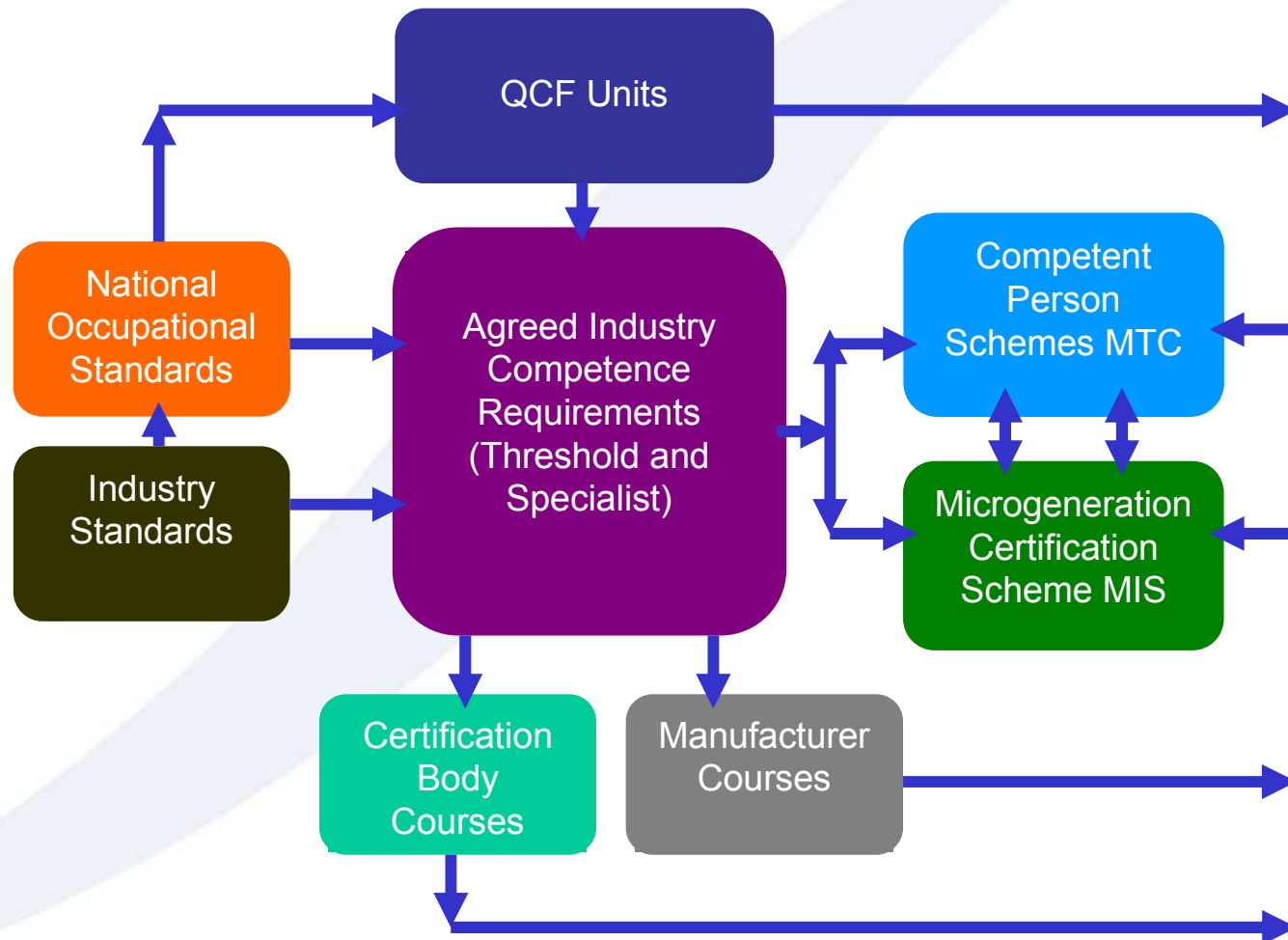


Pathway may require completion of units for more than one technology

What is the industry faced with?



Removing the Confusion



Thank You

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