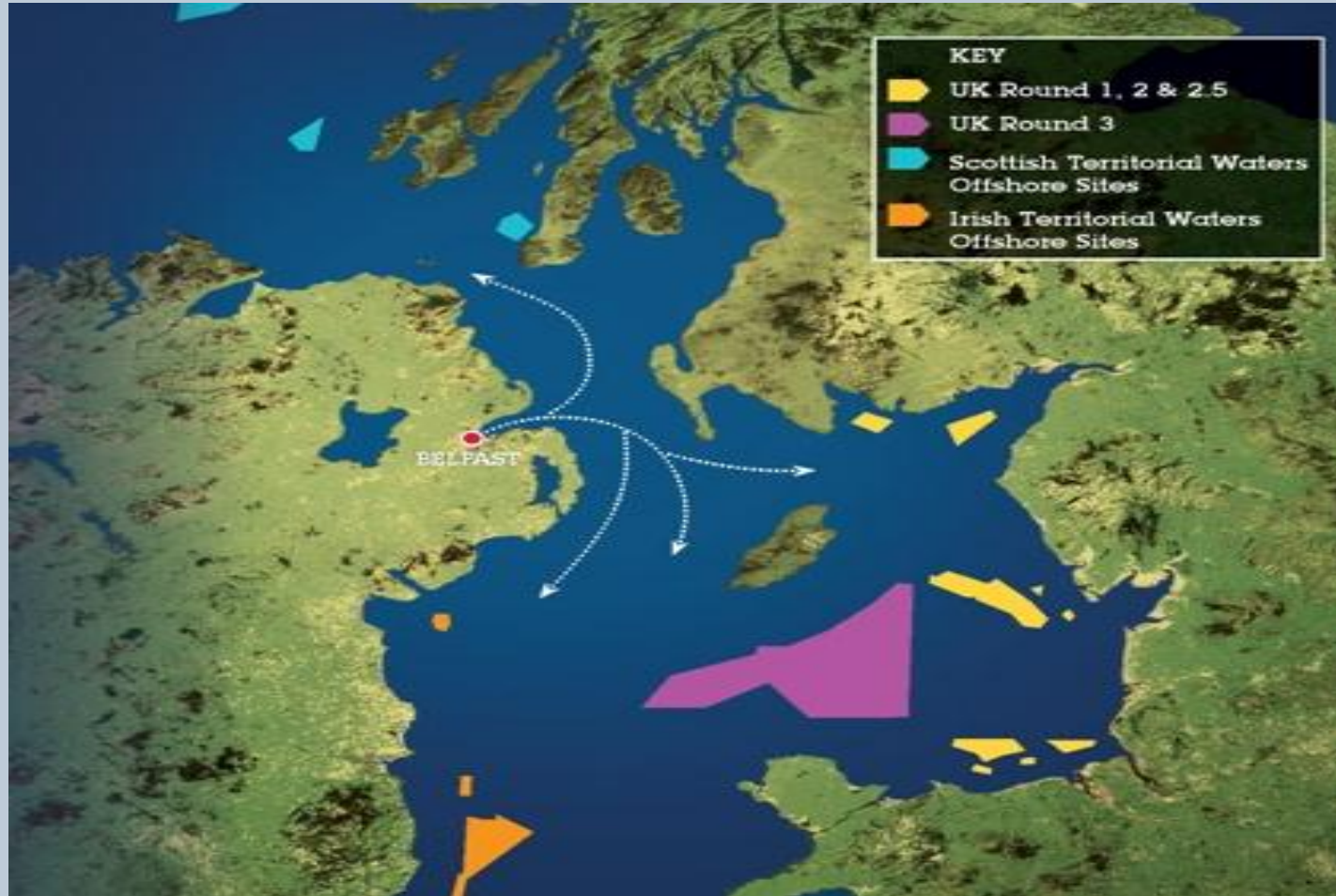


Offshore Energy Supply Chain

Sam Knox

Invest Northern Ireland

Potential £50 billion Irish Sea Zone



Offshore Energy: Business Opportunities

- Tower Manufacture
- Operation and Maintenance
- Civil Engineering
- Construction Management
- Grid Connections
- Grid Infrastructure
- Logistics
- Transport
- Accommodation Platforms
- Service vessels
- Service ports
- Turbine Foundations
- Cable Installation

Northern Ireland Proposition

**“Northern Ireland is the United Kingdom’s
leading low carbon research, design and
manufacturing region”**

Offshore Wind



Research and Development



Northern Ireland Advanced Composites & Engineering Centre (NIACE)

Competence Centre for Sustainable Energy (CCSE)

Invest NI Company Capability Profile



Harland and Wolff Heavy Industries Ltd



Powerteam Electrical Services



Development and Consenting

Sea Bed Surveys – ANIFPO Energy Services



Environmental Surveys



Legal Services



Design and Manufacture

Design



Non Corrosive Equipment



Metal Fabrication



Design and Manufacture

HV Connections



Control Panels



Construction and Installation

Supplies and Services



Ship Supplies and Services



Construction and Installation



Belfast Harbour

Large manufacturing, logistics and service port



Harland & Wolff



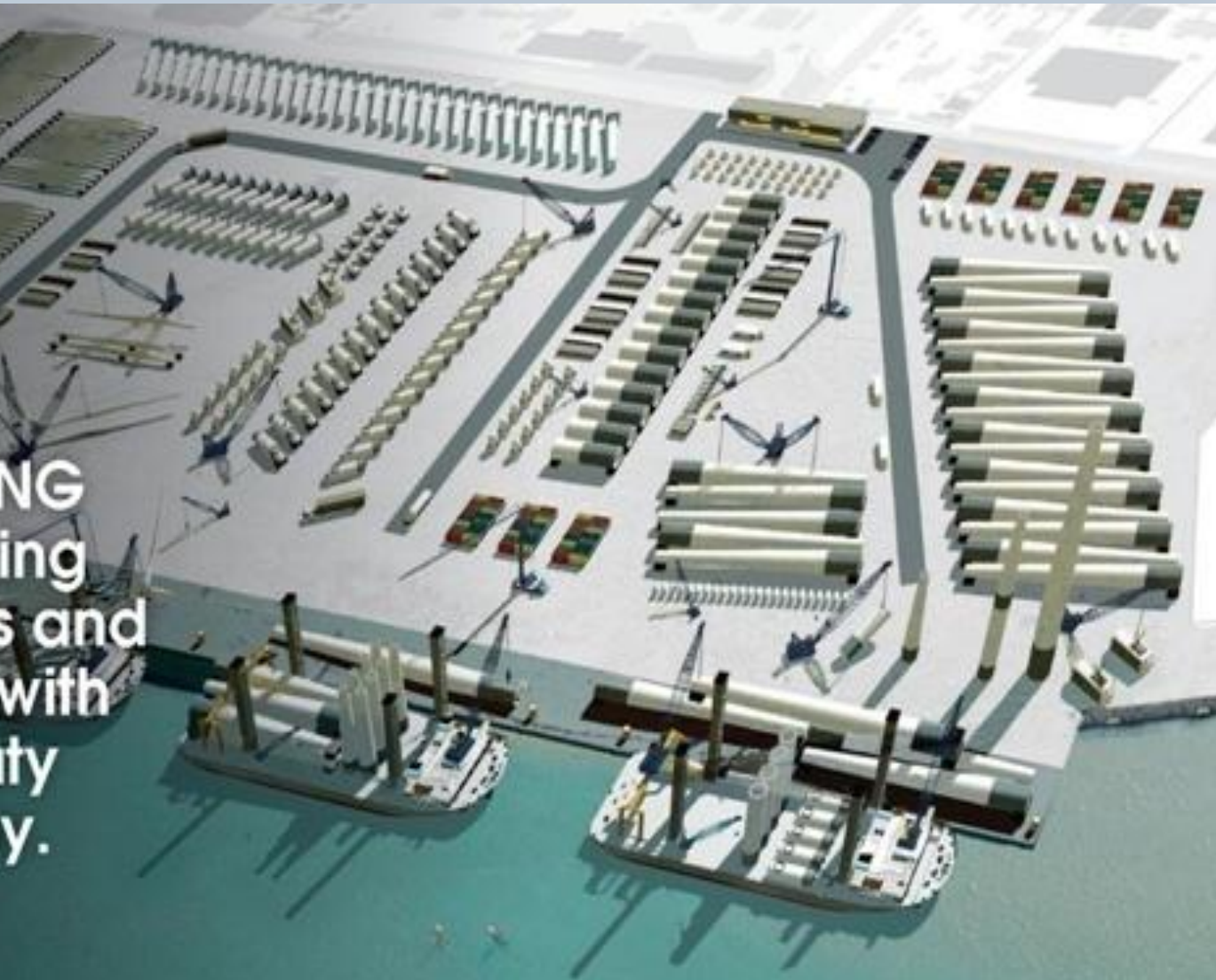
Large Manufacturing, Logistics and assembly facilities



DONG Energy Site – Farrans Ltd

Proposed Facilities

Proposed £40m Offshore Wind Terminal for DONG Energy comprising 50 acre logistics and assembly area with 480m heavy-duty deepwater quay.



DONG Energy Supply Chain

Turbine Supplier

- **Hydraulic Services**
- **Steel Fabrication**
- **Fuel Suppliers**
- **Generator suppliers**
- **M&E services**



DONG Energy Supply Chain

Installation vessel company

- Divers
- Ship Pilots
- Ships Chandlers
- Changeover Crew
- Laundry Services



DONG Energy Supply Chain

Foundation manufacturer

- **Mobile Crane operators**
- **Forklift operators**
- **Waste Collection services**
- **Security**
- **Communication equipment**
- **Welders**
- **Painters**



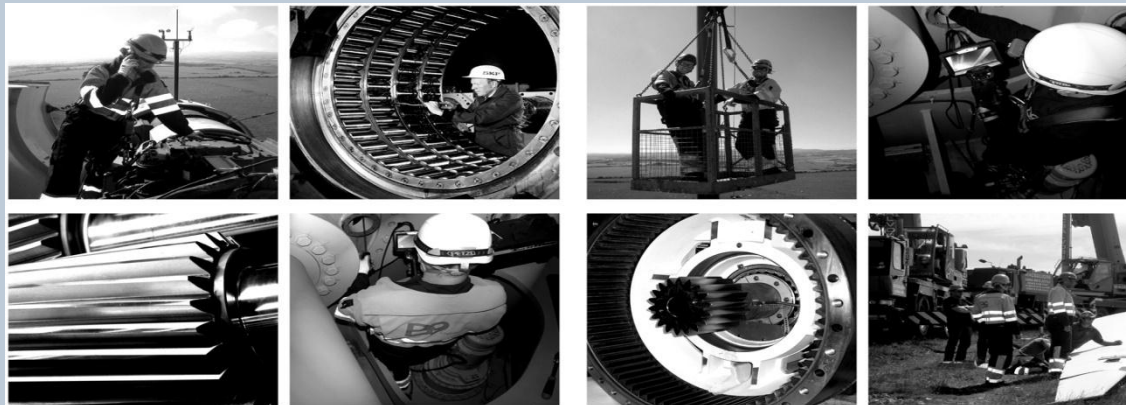
Operation and Maintenance

Service Vessels



Work Boats and Transfer Systems

Wind Energy O&M



Port of Warrenpoint

Large logistics and service port



Port of Kilkeel

Small logistics and service port



Skills Training – New Engineers

Wind Turbine Apprentice Course – Belfast Metropolitan College

Wind Industry Foundation Degree – South West College

Offshore Accreditation - South Eastern Regional College (Newtownards)

Next Steps

Invest NI Trade Programme

EWEA Exhibition (Amsterdam)

28-29 November 2011

All Energy Aberdeen 23/24 May 2012

**Renewable UK Global Offshore Wind Conference
London 13/14 June 2012**

“Ready to do Business”

Invest 
Northern
Ireland