Weather and Sailing 2018
Data – The Next Aid to Navigation?

6th October 2018
Statutory Functions

Provision & Maintenance of General Aids to Marine Navigation (AtoN)

Superintendence and Management of Local AtoN

Marking or Removal of Dangerous Wreck (outside of harbour areas)

General AtoN
- 65 Lighthouses
- 116 Buoys
- 20 Beacons
- 23 Racon
- 123 AIS
- 1 Virtual
- 12 Met Ocean
- 3 DGPS

Local AtoN
- Non Aqua 2,401
- Aqua 858
- Total 3,259
International Standards
Mission

Safe Navigation at Sea

To be a leading and innovative provider of reliable, efficient and cost effective navigation and maritime services for the safety of all
Vision

Next Generation Maritime Services

Delivering Next Generation Maritime Services at the interface of navigation, technology, engineering and data management
Strategy Consultation

- International Aids to Navigation Providers
- Commercial SOLAS vessels
- Fishing and Aquaculture
- Leisure and recreation
- Local Authorities
- Government Agencies and Departments
Focus Areas

- General Aids
- Local Aids & Navigation Services
- Commercial Services
- Value Added Services
- Heritage & Community
Data Service Enablers

- AIS
- e-Navigation
- Maritime Connectivity Platform
- Maritime Services
- VHF Data Exchange System
- Battery and Renewable Energy Technology
- Social Media
- IOT
- People
Enablers in Action

The Fastnet Project

Over 1,000 Watts to less than 30 Watts
Buoys
New Buoys?
Data Stations & Sensors

10 Buoys
2 Lighthouses

Sensor Data
- Average wind speed
- Average wind direction
- Wind gust speed
- Wind gust direction
- Wave height
- Wave period
- Sea water temperature
- Air temperature
- Relative humidity
- Air pressure
Social Media

**Ballybunion Buoy** @BallybunionBuoy · 6m
Avg Wind:5kts, Gust:12kts, Wave Height:2m, Wave Period:5s, Wind Dir:214 °(SW), Gust Dir:236 °(SW) at 26/09/2018 09:45:00

**Finnis Buoy** @FinnisBuoy · 6m
Water Temp:14.8 °C, Gust Dir:178 °(S), Wind Dir:224 °(SW), Wave Period:6s, Wave Height:3.7m, Gust:27kts at 26/09/2018 09:49:00

**Foyle Buoy** @foylebuoy · 6m
Water Temp:13.4 °C, Wave Height:0.7m, Wave Period:3s, Gust:27kts. Avg Wind:19kts, Wind Dir:237 °(SW) at 26/09/2018 09:50:00

**South Hunter Buoy** @southhunterbuoy · 6m
Water Temp:14 °C, Avg Wind:7kts, Gust:12kts, Wind Dir:180 °(S), Gust Dir:184 °(S) at 26/09/2018 09:48:00

**Dublin Bay Buoy** @DublinBayBuoy · 6m
Water Temp:13.7 °C, Wave Height:0.7m, Wind Dir:279 °(W), Gust Dir:294 °(NW), Avg Wind:14kts, Gust:20kts at 26/09/2018 09:50:00

**South Rock Buoy** @southrockbuoy · 25m

**Ballybunion Buoy** @BallybunionBuoy · 25m
Avg Wind:9kts, Gust:17kts, Wave Height:2.2m, Wave Period:5s, Wind Dir:243 °(SW), Gust Dir:263 °(W) at 26/09/2018 09:30:00
Challenges

• Deployed on existing AtoN network
• Validation and Correlation
• Payload and power considerations
• Platform design
• Data quality and application
• Data presentation to user
• Data provisioning to other sources
Next steps

• Data quality requirements
• Operational network upgrades
• Site assessments
• Consumer services and engagement
• Mobile application development
• Collaboration partners
IALA Definition

A device, system or service, external to vessels, designed and operated to enhance safe and efficient navigation of individual vessels and/or vessel traffic.
Please Don’t

Buoys Are Not Playthings!
Other Issues

• DGPS Survey
• 2020 AtoN Review
• GNSS Vulnerability
• Apps
• User Feedback
• Great Lighthouses – TV Series