

*Commissioners of Irish Lights*

# 2015 & BEYOND

*Charting Our Future Course*





The Commissioners of Irish Lights (CIL) is the General Lighthouse Authority (GLA) for the island of Ireland, its adjacent seas and islands. CIL, together with the Northern Lighthouse Board (Scotland) and Trinity House (England & Wales) operate an integrated aids to navigation (AtoN) service throughout the coastal waters of Ireland and Great Britain. The GLA meet the British and Irish Governments' responsibilities under the International Maritime Organization's Safety of Life at Sea (SOLAS) convention. CIL is vested under the Merchant Shipping Acts in Ireland and the UK with the responsibility for superintendence and management of all aids to navigation.



# VISION STATEMENT

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CIL will be a leading maritime organisation recognised as:

- providing valuable Aids to Navigation and allied services.
- delivering an essential public safety service, at an economic cost, funded by a diverse range of stakeholders and customers.
- a rewarding place to work, where employees are valued for their contribution and supported to develop their potential.
- an innovative and flexible organisation to do business with and a partner of choice for others in the private and public sector.

# MISSION STATEMENT

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To provide Aids to Navigation and Allied Services for the Safety of Persons and Infrastructure at Sea, the protection of the Marine Environment and to support the Marine Industry and Coastal Communities.





## CIL – A History of Change & Development

Change will always be a part of our lives. Over our long history, the Commissioners of Irish Lights (CIL) has led change and innovation and implemented many changes and technological developments.

### 21st Century

*In the first ten years of this century many technological developments have taken place in the aids to navigation arena including a CIL automatic identification system (AIS) network which transmits and receives navigation and met ocean related data electronically.*

*Global Navigation Satellite Systems (GNSS) were recognised as the primary means of navigation for most users with visual and radio aids to navigation (AtoN) recognised as providing essential, complementary and back up information.*

*ILV Granuaile, delivered in February 2000, set a new standard for GLA vessels with innovative design features providing a significant increase in operating capacity, versatility and commercial use.*

*Technological developments in buoy structures and lights enabled the removal of high cost lightvessels and large automated navigation buoys (LANBY).*

*Improved coating systems have allowed buoys to remain on station for up to six years and longer periods on station are under consideration.*

*Light Emitting Diode (LED) technology introduced to provide reliable low power light solutions for lighthouses, buoys and beacons.*

### 20th Century

*In the 1990s, commenced use of renewable energy sources such as solar, wind and wave.*

*In the 1980s, the lighthouse automation and central remote monitoring for programmes for offshore lighthouses commenced leading to a significant reduction in employee numbers by the late 1990s. A differential GPS (DGPS) service was introduced to provide integrity and improved accuracy for the United States GPS satellite positioning service.*

*In the 1970s, the lightship automation programme and the introduction of LANBY to replace lightships commenced leading to a significant reduction in costs. In 1974 Rathlin O'Birne lighthouse Co. Donegal was powered by nuclear energy and later replaced with solar energy.*

*In the 1960s, the electrification programme commenced and helicopter reliefs were introduced leading to an ultimate reduction in the number of lighthouse tenders from four to one. Radar beacons (Racons) were also introduced to provide radar conspicuous marking for key dangers.*

*Radio beacons were introduced to provide long range (200 miles) positioning.*

*In the 1910s, Carbide Gas was introduced allowing the first lighthouse automations.*

### 19th Century

*The Dublin Port Act (1867) renamed the Corporation for Preserving and Improving the Port of Dublin to the Dublin Port and Docks Board with responsibility for Dublin Port only and responsibility for lighthouses, lightships, buoys and beacons around the coast of Ireland was vested in the Commissioners of Irish Lights.*

*An Act passed by the British Parliament (1810) transferred control of all lighthouses around Ireland's coastline to the Corporation for Preserving and Improving the Port of Dublin.*

### 18th Century

*An Act of Grattan's Parliament (1786) established the Corporation for Preserving and Improving the Port of Dublin for lighthouses in the immediate area. The constitution of CIL is essentially the same today as was laid down in that Act.*

## 2015 & Beyond | Sheila Tyrrell, Chairman



Sheila Tyrrell  
Chairman

In March 2010, the Department for Transport (UK) and the Department of Transport (RoI) published an "Assessment of the Provision of Marine Aids to Navigation around the UK and Ireland". This thorough review of the General Lighthouse Authorities (GLA) by WS Atkins Limited provided a valuable analysis of the requirement and options for change.

The Atkins report recognised and acknowledged that *"the provision of marine Aids to Navigation (AtoN) around the UK and Ireland is undertaken to first class standards with commitment, professionalism and diligence from all those concerned". The GLAs have an "impressive track record of technological innovation, excellence in operational practice, and investment in skills in order to serve some of the most challenging waters in the world enabling the UK and Irish governments to meet their international obligations under the Safety of Lives at Sea (SOLAS) convention with confidence, providing for the protection of lives, preservation of the marine environment and the maintenance of maritime trade".* The report highlighted the pressing need for significant change and the need for action to reduce running costs and capital expenditure and to identify additional sources of revenue. A revision of organisational structures and processes, benchmarking of salaries and conditions, outsourcing or centralisation within the GLA, growing commercial income, review of light dues, disposal of surplus property and exploitation of information and communication technologies were all areas that were highlighted for attention.

The Board of CIL commenced a cost review programme in 2008 and very significant reductions in running costs (17%) and employee numbers (32%) have been achieved in the last four years. However, the imperative for change continues in the context of the on-going economic and financial crises in Ireland and Europe, which have necessitated fundamental reform across the public and private sectors. A further imperative for change in CIL arises from the agreement reached in late 2010 by the UK Shipping Minister and the Irish Minister for Transport that CIL operations in the Republic of Ireland (RoI) will be funded from RoI sources from the 1st April 2015.

Reaching the 2015 milestone is a significant challenge for all in CIL as our funding sources will change.

- Light Dues collected in British ports will no longer contribute to our costs.
- Light Dues from Northern Ireland ports will be accounted for as at present.
- Light Dues will be collected in Irish Ports to reflect the "user pays" model.
- CIL will continue to receive a contribution from the Irish Government.
- Income from commercial services will increase.

In parallel with funding adjustments, our cost base will be reduced further. Running costs (pay and non-pay) and capital costs will be reduced. This process is already underway through consolidation of lighthouse stations, extended buoy replacement programmes, use of low maintenance technologies and business process automation.

2015 represents an important milestone in the history of our organisation. However the changes we are making are focussed beyond that date to secure the future of CIL as a dynamic and innovative maritime organisation capable of delivering sustainable and efficient services for all our stakeholders and customers.

## Planning for the Future | Yvonne Shields, Chief Executive



Yvonne Shields  
Chief Executive

Like many other organisations CIL is directly affected by the enormous challenges in the wider economy and the limitations on public finances. We must become more cost effective, innovative and efficient while still delivering a quality service to all our stakeholders. The changes outlined in this document will deliver a stronger, broader and better organisation for the benefit of all, while retaining the core value of dedicated commitment to safety at sea which has been at the heart of CIL over the generations.

CIL operates an essential public safety service around the island of Ireland. We have delivered a high quality and reliable service for over 200 years. CIL has a unique infrastructure base and possesses a highly experienced and technologically skilled workforce with a proven track record in implementing change. Regardless of the changes to our funding structures, our operating environment is changing rapidly and we must adapt to take account of:

- A reduction in traditional aids to navigation, taking account of the evolution of user needs and modern technical solutions which will allow us to continue to provide a reliable service at a lower cost.
- The Atkins recommendations which have resulted in greater collaboration and more integration with our sister organisations Trinity House and the Northern Lighthouse Board. This has huge benefits for our stakeholders in terms of cost savings, efficiencies, operational flexibility, R&D and innovation.
- New demands from mariners for electronic aids, e-Navigation and new services such as AIS and marine data services.
- The development of marine resources around the island of Ireland including the Irish government's recently announced 'Harnessing Our Ocean Wealth' initiative, the new Northern Ireland Marine Bill and the licensing round for offshore wind and tidal energy. These developments will result in increasing demands on marine safety in tandem with providing new commercial opportunities for the properties and services that we operate.

CIL produces a five year rolling Corporate Plan. The current Plan (2012/17) was devised in the context of the on-going change agenda and:

- Provides for delivery of AtoN to SOLAS requirements throughout the island of Ireland for the period 2012/17, including provision of general AtoN, superintendence and management of Local AtoN and wreck removal.
- Contains targets to deliver on the General Lighthouse Authorities of the United Kingdom and Ireland strategy documents "2025 & Beyond" and "2010 AtoN Review"; the Atkins Review, International Maritime Organization's e-Navigation project and recommendations from the GLA Joint Strategic Board.
- Includes the development of a roadmap to achieve funding of Republic of Ireland activities by 2015/16 with CIL continuing to operate within an All-Island, Inter General Lighthouse Authority (GLA) framework.

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- Reflects CIL's commitment to inter GLA cooperation and benchmarking.
  - Targets a significant reduction in annual running costs from 2011 to 2016 including a significant reduction in our capital works programme through a combination of modernisation and consolidation initiatives.
  - Targets a significant increase in the commercial income over the period of the Plan.

In conjunction with our Corporate Plan, CIL commenced a major organisation change project in September 2011 to take account of the significant manpower reductions in the previous 18 months and identify how best to align our structures and working arrangements to the challenges and opportunities facing the organisation in the future.

Employee input has been at the core of the reorganisation process. A comprehensive list of challenges and opportunities encompassing business, management and people issues were collated from employee feedback and these were factored into the design of a new strategy and structure for the organisation. The diagram on the next page shows the engagement process by employees, management and the Board over the last year.

I want to take this opportunity to thank all of the employees of CIL for the quality of their inputs to this process. The strategy that we are adopting in this document will ensure that CIL as an organisation will deliver on a new vision to:

- Continue to deliver an essential public safety service at an economic cost, funded by a diverse range of stakeholders and customers who are deriving tangible benefits from our services.
- Be recognised as an innovative and flexible organisation to do business with and a partner of choice for others in the private and public sector.
- Be a rewarding place to work, where people are valued for their contribution and supported to develop their potential to deliver in a changing environment.

CIL (" Irish Lights ") is headquartered in Dun Laoghaire but our home and the focus of our service is on the coast. The Irish Lights community extends to the most peripheral coastal regions of Ireland. Attendants, buoy watchers, boatmen, suppliers, aids to navigation users and interested local observers form the community that is Irish Lights. Each plays their part in providing safe navigation and protecting coastal commerce and the environment.

I want to pay tribute to the Board of CIL, under the Chairmanship of Sheila Tyrrell, for their sustained contribution to and support for the process of change. I also appreciate and value greatly the on-going support we receive from the Department of Transport (UK) and the Department of Transport, Tourism and Sport (RoI).

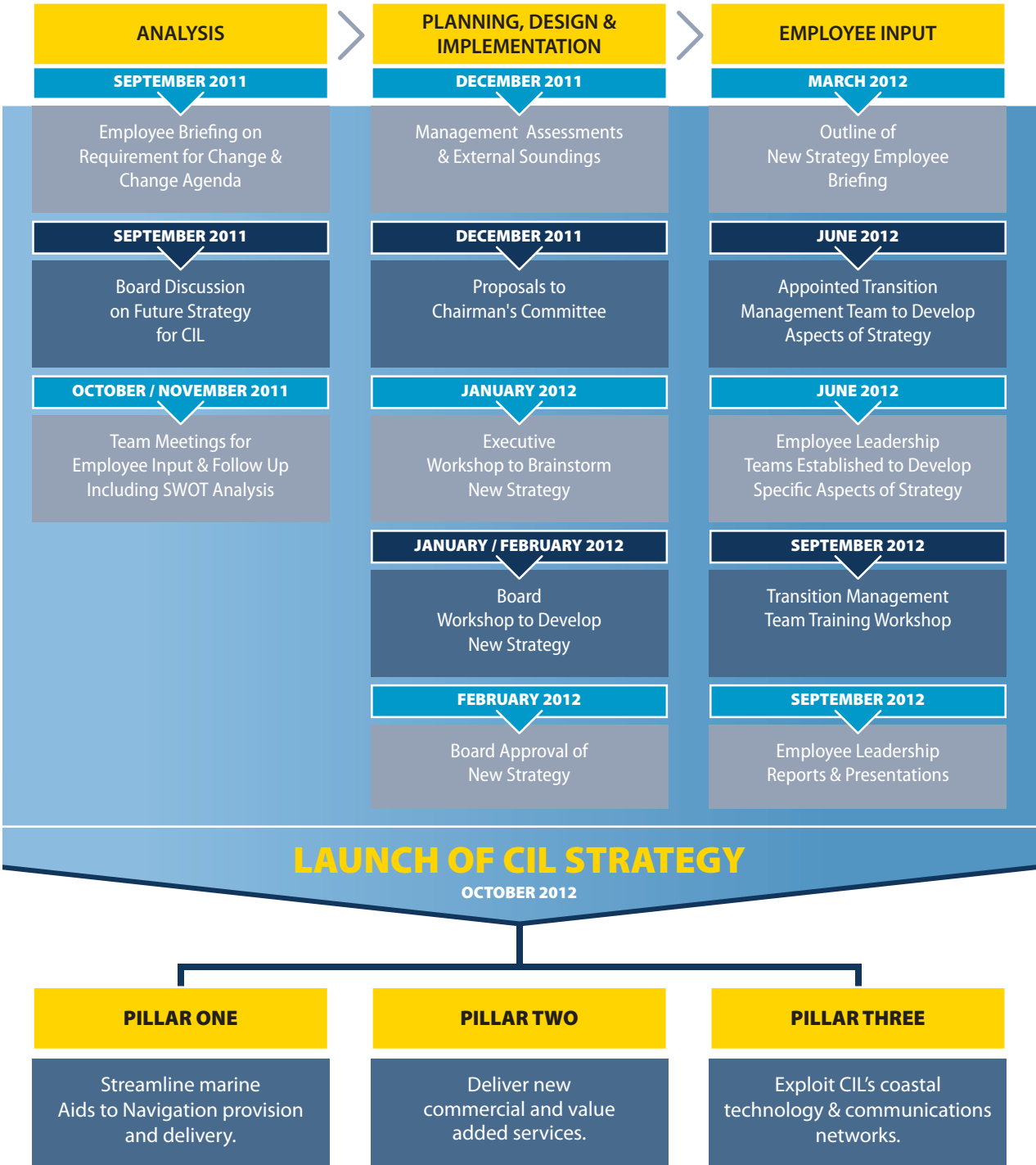
As we look forward we know there will be many challenges ahead as well as exciting opportunities. Building on the great work of previous generations, we know that CIL, as it has always done, will rise to those challenges and avail fully of those opportunities, so that together we can deliver the services and contribution that our mandate requires.

# Strategy for a Stable Future

The vision for CIL set out in this document will benefit all of our stakeholders. Employees, governments, light dues payers, AtoN users, coastal communities, customers and partner organisations will each derive benefit from the improved structures and services. The new CIL will continue to provide the reliable user focussed service that has always been our hallmark. However, the future service will leverage CIL assets and competencies to deliver added value and commercial services which will secure our economic base and improve the strategic value of our organisation.

## Strategy Consultation & Development Process

Following consultation with employees and the Board a three pillar strategy to meet the 2015 and Beyond objectives has been adopted. The diagram below sets out the analysis, planning and employee input phases of this process and the development of our three pillar strategy.







# Streamlining Marine Aids to Navigation Provision and Delivery

<b>OUR OBJECTIVE IS TO</b>	Streamline the existing AtoN business to deliver stakeholder requirements in a cost effective manner.
<b>WE WILL DELIVER BY</b>	Continuing our strategy of reducing costs and utilising technology.
<b>KEY ELEMENTS OF OUR APPROACH</b>	<p>Continue to define navigation requirements based on volume of traffic/ degree of risk.</p> <p>Continue to robustly review all investments to deliver least cost operating solutions including – consolidation, standardisation, simplification and solarisation.</p> <p>Deliver Reliability Centred Maintenance with a results oriented focus.</p> <p>Release additional surplus property for alternative use.</p> <p>Utilise modern technologies to provide best service to the mariner with a minimal maintenance overhead.</p> <p>Consult with users in an effective manner to ensure service is matched to requirements.</p> <p>Adopt energy efficient and environmentally positive solutions.</p>
<b>TIMESCALES FOR DELIVERY</b>	On-going

HIGH QUALITY, RELIABLE AND COST EFFECTIVE SAFETY, NAVIGATION AND MARINE SERVICES



# PILLAR TWO

## Deliver New Commercial and Value Added Services

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### OUR OBJECTIVE IS TO

Deliver new services and expand existing value added services to customers and stakeholders.

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### WE WILL DELIVER BY

Capitalising on strategic and operational assets and developing their commercial potential.

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### KEY ELEMENTS OF OUR APPROACH

Seek to provide an increased range of value added services to government at cost effective rates leveraging our existing skills and assets.

Market surplus ship capacity (directly and/or through partnership or via broker).

Optimise revenue earning potential of Dun Laoghaire facility (office/workshops) and lighthouse estate (tourism).

Secure additional buoy contracts.

Grow existing revenue base by hosting 3rd party equipment targeting communications and environmental monitoring market.

Grow our existing consultancy and training services (offshore energy, risk assessment, and data/information services).

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### TIMESCALES FOR DELIVERY

2012/14 (and on-going)

# SERVING THE MARINER AND THE MARINE SECTOR



## Exploit CIL's Coastal Technology and Communications Networks

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### OUR OBJECTIVE IS TO

Provide communications, e-Navigation and data services to a range of existing and new customers using the CIL coastal and marine network infrastructure.

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### WE WILL DELIVER BY

Providing an enhanced and extended coastal and marine network capable of supporting many types of data and information services.

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### KEY ELEMENTS OF OUR APPROACH

Develop and provide an advanced e-Navigation and communications network incorporating:

- AIS (Automatic Identification System) infrastructure for:
  - » AtoN Monitoring services.
  - » Marine Traffic Analysis services.
  - » Collection and dissemination of marine and environmental data partnering with mandated organisations, industry and academic institutions.
  - » Enhancing vessel message reception range for search, rescue and security responses.
- Differential GPS (DGPS) infrastructure providing an integrity service, improving accuracy for GPS satellite users and monitoring GPS performance.
- Position, Navigation & Timing services to meet International Maritime Organization requirements and for multi-modal users.

Develop and/or collaborate with organisations to provide new data and information services.

Monitor and test new AtoN technologies for application to CIL and Local Lighthouse Authorities.

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### TIMESCALES FOR DELIVERY

2013/20 (and on-going)

## A Fit for Purpose Organisation

Meeting these challenges and delivering on the three pillar strategy will require significant change in our organisation. There is a need to act now to develop a “fit for purpose” organisation to meet our 2015 and beyond targets.

A new structure is an integral part of this change but the more important element is the creation of an open, “single status” workplace that fosters cross departmental working and collaboration. A “single status” workplace will require revision of the terms and conditions of employment for everyone in CIL. Procedures and rules will be simplified and consolidated to facilitate flexibility and effectiveness.

The structural change is designed to support the “single status” workplace and deliver on the three pillar strategy.

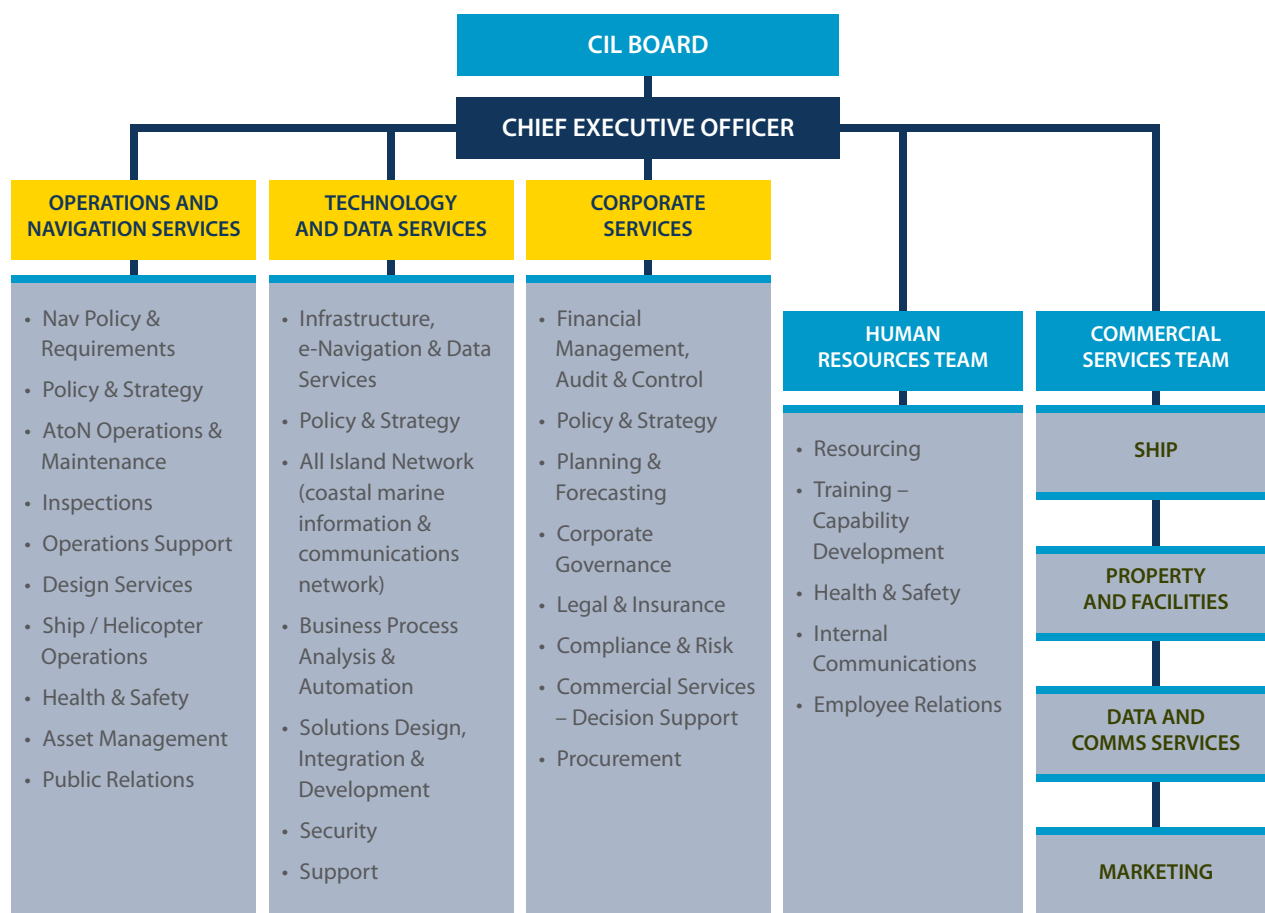
The new CIL structure includes:

### Three Service Departments

- Operations & Navigation Services – navigation policy and delivery of user services.
- Technology & Data Services – delivery of internal and external data services, e-Navigation and development of next generation navigation and safety services.
- Corporate Services - corporate governance, financial management, procurement, commercial services decision support.

### Two Special Purpose Units

- Human Resources – resourcing, training and supporting our employees.
- Commercial Services – delivery of improved commercial revenues, expanding commercial and value added services.







## Making a Start

The strategy set out in this document was adopted by the Board of CIL in February 2012. Since then the organisation has commenced a major change process to deliver on the new strategy.

Key activities to date include:

- In May 2012, departmental structures were re-organised and new appointments were made at senior management level.
- In June 2012, nine employee leadership teams were formed to engage employees throughout the organisation in evaluating aspects of the future strategy such as cost cutting, revenue generation, tourism and heritage opportunities and the provision of new value added services to customers and stakeholders.
- In July 2012, a Transition Management Team was established to work with the Senior Management Team to further develop the new business strategy, to provide input to the organisation change plans and a new performance management system, and to support the Employee Leadership Teams.

At the business end and specifically in terms of the three pillars of the new strategy, the following has been achieved to date in 2012:

## PILLAR 1 ACHIEVEMENTS IN 2012

STREAMLINING MARINE AIDS TO NAVIGATION PROVISION AND DELIVERY	
<ul style="list-style-type: none"> <li>• Consolidation of station infrastructure and equipment resulting in long term annual maintenance savings of €700K per annum.</li> <li>• Outsourcing of station painting commencing with Hook Head, Slyne Head and Kish resulting in significant cost savings.</li> <li>• Reduced back office administration through the introduction of online systems.</li> <li>• On-going development of the aids to navigation portal for Local Lighthouse Authorities.</li> </ul>	<ul style="list-style-type: none"> <li>• Transferred 31 AtoN to Local Lighthouse Authorities as part of the 2010 AtoN Review resulting in lower costs.</li> <li>• Use of new LED and solar technologies in Roancarrigmore Skelligs and other stations to simplify AtoN systems, improve reliability and reduce maintenance requirements.</li> <li>• Improved procedures introduced for Board and operational inspections.</li> <li>• Employee Leadership Teams established to develop proposals for cost reductions have reported their findings and identified additional savings.</li> </ul>



## PILLAR 2 ACHIEVEMENTS IN 2012

### DELIVER NEW COMMERCIAL AND VALUE ADDED SERVICES

- Targeting of new opportunities for ship charter through the use of brokers and direct marketing initiatives. This has resulted in a major (71 day) charter for ILV Granuaile.
- Building strategic alliances. Expanded the MoU with Irish Coast Guard and new partnership with Irish Naval Service, further MoU/SLA under consideration with complementary state bodies.
- New partnership contracts for assembly and provision of 3rd party AtoN including the recent Belfast Harbour contract.
- Produced three brochures marketing CIL services and attended a number of conferences and exhibitions to profile the organisation to new customers.
- Developed new data and consultancy services for the offshore renewable energy sector e.g. monitoring/tracking buoys for ESBI.
- Applied for and have successfully been short-listed for a significant EU tourism infrastructure grant aimed at developing sustainable alternative uses of surplus assets at key sites around the northern coastline as part of a major new initiative CIL's "All-Island Lighthouse Tourism Trail".
- Employee Leadership Teams established to develop proposals for tourism and heritage, use of spare capacity and website upgrade have reported their findings.

## PILLAR 3 ACHIEVEMENTS IN 2012

### EXPLOIT CIL'S COASTAL TECHNOLOGY AND COMMUNICATIONS NETWORKS

- Successfully trialled in partnership with the Marine Institute and Techworks Marine Ltd the provision of met ocean data and information service via social media and the CIL AIS network during the Volvo Ocean Race finale in Galway.
- Deployed virtual AtoN to mark wrecks and other hazards in order to ensure safe navigation.
- Engaging with *SmartBay Ireland – National Research Test and Demonstration Platform for Marine Technology* and the academic/research communities to explore the feasibility of developing value added services.
- Reviewing market/stakeholder requirements for the delivery of value added services via the CIL monitoring and coastal communications networks.
- Employee Leadership Team established to develop proposals for leveraging CIL infrastructure for environmental monitoring has reported preliminary findings.

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## Securing Our Future

The next stage of the change project will include a fundamental re-structuring throughout the organisation. In October 2012, we will enter into consultation with our employees to reach an agreement which we believe will secure the future of the organisation. All our operations will be focussed on defined targets and all employees will be accountable for their contribution to the delivery of CIL strategy, plans and objectives.

A lower cost base will ensure that we can deliver a cost efficient navigation service to our key customers. In addition, CIL recognises that this is an exciting and challenging time for marine businesses and organisations in Ireland, in Europe and around the world. The recently announced 'Harnessing Our Ocean Wealth – Integrated Marine Plan for Ireland' and new developments in the aquaculture, offshore renewable energy and the leisure sectors offer significant opportunities for an organisation with our experience, resources and ability.

Making the required changes to our strategy and structure will ensure that the organisation will continue to prosper in this new environment by meeting the requirements of our customers and stakeholders efficiently and effectively, as we have for over 200 years.

## Measuring Success

CIL will measure the success of the 2015 and Beyond strategy in a number of ways including:

- Meet international standards for aids to navigation availability and performance determined by the International Association of Lighthouse Authorities (IALA).
- Establishment of our new 'fit for purpose' organisational structure aligned to our new strategy – CIL 2015 & Beyond – Charting our Future Course.
- Provide a safe working environment for all our employees.
- Alignment of our Corporate Plans and budgets to the new strategy and financial targets.
- Delivery on maintenance, capital and payroll targets.
- Delivery on commercial revenue targets across the business.
- Collaboration with other GLA to optimise service delivery.
- Performance and development system established and operating effectively.
- 2010 Aids to Navigation Review changes completed.
- Savings from station consolidation strategy achieved.
- Development of alternative uses for heritage properties including the All Island Lighthouse Tourism Trail concept.
- Development of the CIL coastal communications and network infrastructure and provision of value added data services.
- Meet General Lighthouse Authority (GLA) risk assessment and emergency response criteria (6/12/24/48 hour).
- Meet defined and agreed GLA strategic and operational key performance indicators (KPI).
- CIL acknowledged within the maritime community as a quality aids to navigation service provider to meet user requirements.

# CIL Network of Coastal and Marine Infrastructure



Legend	
★	Lighthouse 35
★	Lighthouse & AIS 37
●	Buoy 82
⊙	Buoy & AIS 39
■	Beacon 29
Ⓜ	Helipad 8
⊙	AIS Station 1
Ⓜ	DGPS 1





## CIL Infrastructure - A National Asset

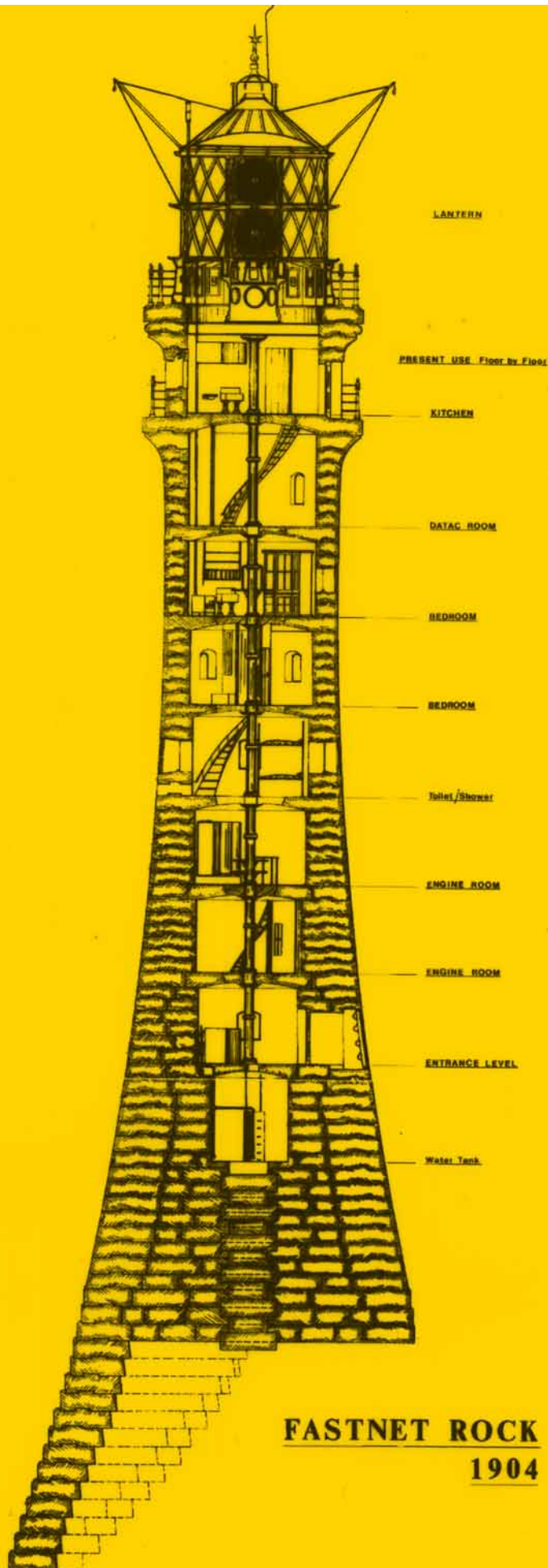
CIL has an All Island network infrastructure consisting of onshore and offshore sites and platforms which can either provide or facilitate the delivery of a range of services for government, local authority, industry, research institutions and the general public.

CIL can cater for:

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<b>AQUACULTURE &amp; OFFSHORE PLATFORMS</b>	<ul style="list-style-type: none"><li>• Navigational risk assessment.</li><li>• Decision support data.</li><li>• Marking advice.</li><li>• Marking, mooring and monitoring services.</li></ul>
<b>COASTAL &amp; MARINE TOURISM</b>	<ul style="list-style-type: none"><li>• Key coastal properties.</li><li>• Experience with coastal tourism partnerships : Hook Heritage (Hook Head), Mizen Tourism (Mizen Head), RSPB (Rathlin West) and Clare County Council (Loop Head) and Irish Landmark Trust.</li><li>• All island Lighthouse Tourism Trail.</li></ul>
<b>DATA NETWORKS &amp; SERVICES</b>	<ul style="list-style-type: none"><li>• Established network and partnerships.</li><li>• Staff experience and competencies.</li><li>• International standards input.</li></ul>
<b>MARINE RENEWABLE ENERGY</b>	<ul style="list-style-type: none"><li>• Experienced in offshore activities.</li><li>• Navigational risk assessment.</li><li>• Decision support data.</li><li>• Marking advice.</li><li>• Marking, mooring and monitoring services.</li></ul>
<b>MOBILE COMMUNICATIONS</b>	<ul style="list-style-type: none"><li>• Key coastal locations.</li></ul>
<b>SURVEILLANCE &amp; SECURITY</b>	<ul style="list-style-type: none"><li>• Key coastal sites and contacts.</li><li>• Communications and data networks.</li></ul>
<b>VESSEL TRAFFIC SERVICES</b>	<ul style="list-style-type: none"><li>• Met/Hydro data services.</li><li>• Positioning services.</li></ul>

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'In shaping the marine environment of the future, care must be taken to remember that not all vessels are at the cutting edge of technology and such advances as virtual navigation marks and automated chart correction will only be usefully accessible to the better equipped vessels for many years to come'

Steve Clinch  
Chief Inspector of Marine Accidents (MAIB)  
September 2012





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