

MARINE DATA: COSTS AND BENEFITS

IN REVIEWING A REPORT FROM THE MARINE ENVIRONMENTAL DATA AND INFORMATION NETWORK (MEDIN), **DR MIKE OSBORNE** EXPLAINS WHY IT'S NEVER BEEN SO IMPORTANT TO UNDERSTAND AND MANAGE YOUR DATA

Data is fundamental, and how we organise, store, manage and maintain it has a direct impact on how we go about our day-to-day lives and how businesses function. We are constantly creating, storing and sharing data even when we don't even realise that we are doing it, and often this data exists in 'silos'. As such, it is compartmentalised into independent repositories, either within departments or applications that cannot or do not enable data sharing.

The result of this leads to data inconsistencies, replication, inefficiencies and, ultimately, confusion. Translate this into a business scenario and operations do not flow seamlessly or efficiently; time and money are needlessly spent, and a state of 'data anarchy' exists.

Apart from its employees, the data and the information held by an organisation

are its most valuable assets; without them, it would not be able to operate, at least not efficiently. So, we must ask ourselves, why is data governance not at the forefront of all operations?

Independent analysis

This importance of understanding and managing data was highlighted by the Marine Environmental Data and Information Network (MEDIN) in an independent analysis of its services¹. Compiled by a team of experts from Economics for the Environment Consultancy (eftec) and marine consultants ABPMer, it found that the benefit-to-cost ratio of investing in marine data management and dissemination infrastructure through MEDIN services is approximately 8:2, indicating that "the benefits far outweigh the costs of providing the service".

The financial and societal benefits that MEDIN brings to the UK accrue from efficiency gains arising from easier access to data; reduced duplication of marine surveys; improved data management; improved community working and better decision-making.

The analysis identified a quantitative method to derive this information from MEDIN users and this proved effective across most of the benefits that MEDIN provides – users recognised that MEDIN's services improved decision-making but found it difficult to quantify the benefits. Had such monetary benefits been included, then the benefit-to-cost ratio would almost certainly have been even higher. More than 120 individuals responded to a survey produced for the analysis. They were drawn from across MEDIN's main user groups: government departments

The Impact of Poor Data Governance will only Grow



On average, organisations waste **15-18%** of budgets dealing with data inaccuracies



In UK in 2013 **0.18%** of online orders could not be delivered because of poor address data – that's **1.4 million** orders



The US economy loses **\$3.1 trillion** a year because poor data quality



Millions of UK National Health Service patient records sold to insurance firms

Efficiency and productivity drops

Necessary rework increases

Reputation is damaged

further reducing operational costs with a drive to improve data management within the research community. The analysis found that the smallest cost benefit (just under 20%) of MEDIN was from time savings on the gathering of primary data, and this therefore is an area of development for MEDIN.

MEDIN's governing body, the MEDIN Sponsors' Board, view this report very positively and as an excellent starting point from which to develop future analyses of the benefits and costs of investing in a marine-data management and dissemination infrastructure through MEDIN. A follow up cost-benefit analysis is scheduled towards the end of the period covered by the current MEDIN Business Plan in 2024. This will benefit from the lessons learned in conducting the current analysis. This report highlights the significant benefits of organisations investing in data governance and the importance of data management skills and methods at all levels.

1. MEDIN Cost Benefit Analysis Final Report, 2019



Dr. Mike Osborne is an Executive Team member of the Marine Environmental and Data Information Network (MEDIN); Chairman of OceanWise Ltd; an invited expert on the IHO Marine SDI Working Group, and recipient of the 2017 Association of Marine Scientific Industries (AMSI) Business Person of the Year award.

and agencies; commerce and industry; academia; charities; and conservation bodies.

When efficiencies are considered in an operational sense, we normally think of cost-saving methods or methods to streamline operational processes. The research undertaken as part of this study found that the largest monetised benefit comes from own data management time savings, making up almost 50% of the total benefits.

It is well-known that data is key in the decision-making process, but it is hard to quantify the impact of greater marine-data availability on improved decision-making processes directly related to MEDIN. This measure was therefore not included within the analysis. However, this impact is likely to be significant. Analysis of the size of activity or sector which utilises the MEDIN services, such as the annual UK marine science spend, could be undertaken to establish

the percentage efficiency on the total value realised. Future work may look to investigate the cost benefit of 'additional' benefits provided by MEDIN, such as the enabling of networks and broader societal benefits through improved management and use of marine resources from MEDIN services.

Recommendations

The report concludes that MEDIN is a very valuable service that enhances the ability of marine-focused organisations to effectively conduct their activities and support their aims. A suite of recommendations was presented within the report that will help inform MEDIN's work over the next few years. This included the recommendation to promote greater links with academia and other data providers to increase data availability. Improved awareness of data availability would also promote the ethos of 'collect once, use many times';