CONCLUSION

Reflections on the theme issue outcomes the fourth industrial revolution

What are the realities for maritime and tourism dependent countries?

Ibrahim Ajagunna
Department of Academic Studies, Caribbean Maritime Institute, Kingston, Jamaica

Fritz Pinnock
Executive Office, Caribbean Maritime Institute, Kingston, Jamaica

Evette Smith Johnson
Faculty of General Studies, Caribbean Maritime University, Kingston, Jamaica, and

Richard Teare
Managing Editor, Worldwide Hospitality and Tourism Themes

Abstract

Purpose – The purpose of this paper is to profile the *WHATT* theme issue: "The fourth industrial revolution: What are the realities for maritime- and tourism-dependent countries?", with reference to the experiences of the theme editors and writing team.

Design/methodology/approach – Structured questions were used to enable the theme editors to reflect on the rationale for the theme issue question, the starting point, the selection of the writing team and material and the editorial process.

Findings – This paper identifies the ways in which both industry and education need to change and embrace emerging technologies with particular reference to tourism and maritime provision and infrastructure in the Caribbean region.

Practical implications – The theme issue outcomes provide indicators and action points for tourism and maritime industry stakeholders and for academics involved in planning and delivering learning support to these industries.

Originality/value – This paper draws on discussion and applied research with industry to identify and assess the likely impact of the fourth industrial revolution in tourism- and maritime-dependent countries. Taken together, the theme issue collection of articles provides a rich picture of the changes occurring and prospects for the future.

Keywords Industrial revolution, Tourism, Maritime, Fourth Industrial Revolution, Technology, Education, Caribbean region

Paper type Editorial

Theme Editors Ibrahim Ajagunna, Fritz Pinnock and Evette Smith Johnson share their reflections on the significance and outcomes of the theme issue with Managing Editor Richard Teare.

Overview
The third industrial revolution – sometimes called the digital revolution – arose from the development of computing and the adoption of information technology that followed. It is argued that the fourth industrial revolution (4IR) reflects a new era rather than more of the same because of the disruptive nature of emerging technologies. In today's business world, companies are seeking to exploit new technologies, increase productivity and reduce the marginal cost of producing and distributing goods and services so they can lower prices and secure more customer share and profits for investors. To grasp the enormity of the economic change taking place, both tourism and maritime need to understand the technological forces that have given rise to new economic systems. Tourism and maritime as economic activities require elements of communication and transportation to interact with the other elements in the supply chain to create a productive and profitable system and to move economic activities across the value chain. Given the significance of the changes that are occurring, this theme sought to address the question: *The fourth industrial revolution: What are the realities for maritime- and tourism-dependent countries?* A list of the articles in this issue can be found in the Appendix.

Why, in your view, is your theme issue's strategic question important?
The 4IR is upon us, and many industries are already responding. The tourism and maritime industries are an important segment of ever-developing and emerging economies, and thus, responsiveness to the 4IR is a key sustainability tool for these two interdependent industries. In maritime, unmanned ships are being built, and tourism facilities globally must respond to this new way of thinking and business facilitation.

Thinking about your theme issue plan and approach, what worked well?
The theme issue question was well received by key industry partners and colleagues in academia. We think that the number of articles and the issue's broad-ranging content are an indication of the level of interest in understanding the impact of the 4IR on tourism, maritime education, logistics and supply chain operations.

How did you engage with different stakeholder groups?
The impact of the 4IR was a component of on-going discussion with the executive members of the Port Management Association of the Caribbean and specifically at the Association's previous general meeting in Fourth Lauderdale, USA. The theme editors helped to facilitate this meeting to discuss the issue of the 4IR and its impact on Caribbean ports. The reality for cargo and cruise ports in the Caribbean is that they have long suffered from inadequate infrastructure, and the modern equipment needed to compete at the global level. The day-long meeting concluded that Caribbean ports must respond to the new technology challenge and the Internet of Things (IoT).

What were the highlights from stakeholder group interactions?
The contributions made by industry partners through round table discussions and follow-up telephone conversations were especially meaningful. Some ports in the Eastern Caribbean are already responding by modernising their ports and by introducing new technologies such as ASYCUDA, track and trace and by implementing better ways of

processing cruise ship passengers with fewer delays at the point of arrival and departure. For example, Kingston Wharves Limited and the Port of Montego Bay in Jamaica have made long-term investments over a sustained period to modernise by implementing new, state-of-the-art technology and information systems.

Thinking about your peer review process: What went well and why?

Reviewers were carefully selected based on their academic and industry experience. Feedback from practitioners tended to be more concise because of the fact that this was a novel experience for them – they said that they had not previously been engaged in reviewing articles in the area of 4IR and related technologies. This was quite a new experience for academics too, who commented on the fact that this is a rapidly emerging area that is currently under-represented in the literature. Industry practitioners tended to take a relatively long time to respond because of their work commitments and the fact that most tourism and maritime practitioners are relatively unfamiliar with 4IR thinking. Although there are challenges relating to engaging with these distinctively different stakeholders, we will continue to involve and foster a dialogue between academic and industry-based reviewers, because advances in thinking and knowledge-based applications in maritime and tourism must be industry centred.

What are the most significant outcomes of your theme issue in terms of the contributions to knowledge and/or professional practice?

In most developing economies, the application of 4IR thinking is new; hence, this issue is particularly important to industry partners and some stakeholders in academia. Among others, blockchain technology and the implementation of robotics in hotels and on cruise ships are yet to gain traction. In view of this, many industry practitioners are likely to be interested in this collection of articles. The application of 4IR and advances in science, technology, engineering and maths education are also a feature of this theme issue and will be of interest to academics and students in universities and colleges around the world.

What are the implications for management action and applied research arising from your theme issue outcomes?

The articles in this issue are industry-oriented in accordance with the journal's philosophy and approach. *Worldwide Hospitality and Tourism Themes* (*WHATT*) is especially appealing as a vehicle to facilitate discussion and collaborative work because it is a solution-oriented journal and that is what this issue aims to reflect.

Having served as a *WHATT* theme editor, what did you enjoy about the experience?

Serving as a *WHATT* theme editor is very rewarding because it facilitates an opportunity to acquire new knowledge and advance thinking and practice in a collaborative and productive way. By engaging with and working alongside industry partners, it is possible to create, develop and strengthen networking between industry and academics. This rarely occurs naturally; it has to be fostered with a common goal in mind. *WHATT* enables this because it provides a way of capturing the rich and important dialogue that arises from a theme issue question. There are other benefits too, for example, this issue generated some consultancy work that will help to advance insights as to how the maritime and tourism industries function – both separately and at the points of interaction between them.

Finally, as this theme issue has provoked much interest in the Caribbean region, a theme issue launch event is being planned, and this will take place in the first quarter of 2020. We know that the launch will be attended by industry practitioners, government officials and academics representing a range of institutions. We think that publication of this theme issue, combined with the launch event, will help to accelerate the changes needed to ensure that the region is well placed and ready to take advantage of 4IR-inspired change.

Appendix: Theme issue contents (*WHATT* v12 n1 2020)

Re-imagining the future of education in the era of the fourth industrial revolution
Matthew Olusoji Ilori and Ibrahim Ajagunna
This article aims to bridge the perceived information gap and provides insights into the kinds of educational preparation and the skills and qualifications that 4IR jobs require. Considerations include the need to adapt the curriculum and adoption of appropriate technology for in-class and online delivery.

The fourth industrial revolution: a game changer for the maritime and tourism industries
A. Kobina Armoo, Lanna-Gaye Franklyn-Green and Atneil J. Braham
This article examines the floating dry dock concept and 3D printing technologies with particular reference to the ways in which they have the potential to complement each other. The specific aim is to consider how the tourism and maritime industries in Jamaica could become more robust and competitive.

Blockchain and maritime supply-chain performance: dynamic capabilities perspective
Eric Lambourdière and Elsa Corbin
Maritime supply chains rely on electronic and paper-based processes, leading to efficiency bottlenecks. This article proposes a theory for how implementing digitalisation in the form of blockchain technology (BCT) can improve the efficiency and effectiveness of maritime supply chains.

Understanding the paradigm shift in education in the 21st century: the role of technology and the Internet of Things
Basiyr D. Rodney
This article analyses the potential impact of IoT on education. Taking a systems design perspective, the author argues that IoT represents a paradigm shift in the key drivers of education systems. IoT flattens hierarchies, clarifies purpose around learner needs and reshapes instructional systems.

The dynamics of handcart as a means of informal transportation in support of logistics and tourism: the case of downtown Kingston, Jamaica
Sherona Tasheka Campbell
Kingston, Jamaica, was designated as a UNESCO Creative City in 2016 and has the potential for growth in cultural and community tourism. It is argued that the traditional use of the handcart can be integrated with the tourism package to facilitate movement of tourist luggage from bus terminals and parking lots to guest accommodation.

The integration of automation and artificial intelligence into the logistics and tourism sectors: a Caribbean perspective
Marshalee N. Foster and Stephen L.N.H. Rhoden

This article examines statistical data on the understanding of automation and artificial intelligence (AI) within education, port authority and major operators in the shipping and logistics sector throughout the Caribbean. The aim is to raise awareness as to how automation and AI could be better used to mitigate the impact of climate change and extreme weather events.

Exploring the effects of technology and innovation on changing market requirements and the evolving maritime curriculum: a Jamaican perspective

Evette Smith Johnson

This exploratory review examines, through the lens of a 4IR, the imperative for curricular re-structuring in maritime education and training and the use of market needs analysis to prevent misalignment between training and ultimate job market needs.

Towards sustainable tourism for Ikare: the role of the Tourism Action Club

Ibrahim Ajagunna, Mustapha Bello and Segun Arowolo

This article seeks to promote the development of a form of tourism product that could assist economic development in the Nigerian town of Ikare. Ikare has significant tourism assets that, if well used, could change the socio-cultural and economic outlook of the town and facilitate sustainable development.

Understanding the paradigm shift in maritime education: the role of fourth industrial revolution technologies – an industry perspective

Erica Simmons and Grace McLean

This article examines the changes that will impact learners and learning in the 4IR, with particular reference to emerging technology and provides recommendations for transforming education to meet the needs of the maritime industry.

The fourth industrial revolution: what are the realities for maritime and tourism dependent countries?

Ibrahim Ajagunna, Fritz Pinnock and Evette Smith Johnson

This article re-examines the 4IR and the realities for maritime- and tourism-dependent countries. The theme issue's focus is 4IR and the realities for maritime- and tourism-dependent countries, and this article also considers the implications if these industries fail to attend to immediate and future impacts of the 4IR.

About the Theme Editors

Ibrahim Ajagunna is a Professor and a Deputy President; Fritz Pinnock is a Professor and a President; and Evette Smith Johnson is a Dean, Faculty of General Studies, Caribbean Maritime University, Jamaica.

Worldwide Hospitality and Tourism Themes (*WHATT*) aims to make a practical and theoretical contribution to hospitality and tourism development, and we seek to do this by using a key question to focus attention on an industry issue. If you would like to contribute to our work by serving as a *WHATT* theme editor, do please contact the Managing Editor, Dr Richard Teare via the Emerald website.