## The Next Wave of CRM Innovation in the Asia-Pacific Region: Implications for Research, Teaching and Practice

## Panellists

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**Indranil Bose** – Indian Institute of Management, Calcutta, India

**Venky Shankararaman** – Singapore Management University, Singapore

**Sachithra Lokuge** – Queensland University of Technology, Brisbane, Australia

**Saj Kumar –** SAP (Asia-Pacific) – Singapore

## Background

Over the past decade, there has been an explosion of interest in Customer Relationship Management (CRM) by both academics and practitioners. In particular, companies have endorsed the use of CRM systems to execute the business strategies embedded in CRM concepts. The demand for CRM systems continues to grow as it is one of the fastest growing technology segments in the world. The latest enterprise software forecast from Gartner shows CRM increasing to a $36.5B worldwide market by 2017, a significant increase from the $20.6B forecasted in 2014, highlighting the importance of CRM systems to contemporary markets (Gartner, 2014, 2015). It is widely accepted that CRM systems help companies to organize, automate and synchronize services and data from (pre, after) sales, marketing, customer service and technical support. A successful implementation of CRM will ensure competitive advantage and increased customer interactions through multiple channels across the entire customer lifecycle. These systems facilitate operational interactions using digital channels (as in mobile sales) and also provide sophisticated analytical support to the marketing and business teams in their understanding of customer needs and campaign effectiveness.

Since the mid-2000s, CRM strategists have been presented with a plethora of technology options that aid to deliver CRM solutions to organisations. These technology-driven opportunities can be introduced under four headings. First, the advent and massive proliferation of mobile computing, cloud computing, in-memory technologies and social media, collectively referred to as 'digital technologies' (Nambisan, 2013), fuelled by the consumerization of IT, have purportedly presented organisations with a novel perspective to innovate using CRM systems. Such technologies have presented organisations access to trialable, flexible, easy-to-deploy and cost-effective CRM solutions (Yoo, Boland Jr, Lyytinen, & Majchrzak, 2012). Therefore, such technologies have purportedly disrupted the traditional linear equation for innovation, so that IT sophistication is no longer proportionate to resource availability (e.g. finance and human capital). Second, the consumerization of IT and the massive proliferation of mobile and social technologies have presented organisations an opportunity to observe customer digital footprints. Research and anecdotal commentary suggest that, analysing such digital footprints would enable organisation to tailor-made products and services to customer needs and wants (Im, Grover, & Teng, 2013; Sambamurthy, Bharadwaj, & Grover, 2003). At the same time, there has been a substantial growth in our understanding of handing and analysing big-data through the inventions like in-memory technologies such as HANA® (Wixom et al., 2014). The third perspective relating to CRM systems arrives from the potential growth and the impact of the Internet-of-Things. Though low in penetration, it is said that the Internet-of-Things would innovate and revolutionize the existing customer engagement business models and approaches (Xia, Yang, Wang, & Vinel, 2012). Forth, CRM and related systems are of particularly strong interest to the Asia-Pacific region. Currently, the region houses the two biggest emerging economies with China and India leading most economic indicators. According to Asia-Pacific Economic Cooperation (http://statistics.apec.org/) the region has a GDP of $42,760,622 million and has a population exceeding 4 billion. Interestingly, mobile subscription in the region is at 101%, as compared to 95.5% in the USA.

However, despite a wealth of literature on CRM, much less attention has been devoted to understand the innovation potential of CRM systems in light of the aforementioned technology enhancements. Especially such a discussion on the theoretical and conceptual notions of CRM is necessary for the Asia-Pacific Region.

The objective of this panel therefore, is to initiate some discussion on the regional importance of CRM systems for innovation. This panel brings four academics and a practitioner from a leading enterprise software company specializing in in-memory and Internet-of-Things to a single podium to discuss the implications of CRM innovation to research and teaching in the Asia-Pacific region.

## The Panel Structure

The panel is structured around five key areas.

1. 'C' for Citizen – CRM innovating public sector

The panel chair, A/Professor Sedera from QUT, Australia will open the panel introducing the advancements of Citizen Relationship Management. Citizen Relationship Management refers to a cluster of management practices and channels delivered through IT solutions seeking improved citizen orientation, better accountability and changing the citizen government relationship. In general, government organisations at all levels are looking for technology that can help their employees fully engage with their constituents. Though the topic of e-government is a well-established discipline (Layne & J., 2001), much of its studies have observed how governments connect to their citizens via web sites (West, 2004). However, such studies (e.g., Torres, Pina, & Acerete, 2005; West, 2004) found that there is not a significant relationship between citizens' use of e-government services and the level of trust or satisfaction towards the government. The CRM perspective of citizen relationship management provides an opportunity much beyond the simple connectivity through web portals in e-government. The four trends in CRM outlined in the introduction, especially the consumerization of IT, digital footprints and connectivity through social media encourage governments to treat their constituents as true customers. Thus, a government gains the potential to treat each citizen as a unique customer who can be integrated to a plethora of government services and products. Furthermore, advancements in analytics, big-data and in-memory technologies can assist governments to predict, prevent and avoid a range of socio-economic issues and plan for appropriate interventions.

A/Professor Sedera will outline why Citizen Relationship Management is particularly important to the Asia-Pacific region and will draw specific examples from one of the largest Citizen Relationship Management system initiatives in Australia. He will conclude his discussion with a futuristic commentary on the potential innovations offered through Citizen Relationship Management systems.

2. The new frontier in CRM – India

Professor Bose from IIM-Calcutta will draw specific examples of how CRM has assisted organisations in India. As the second most populous country with a population of over 1.3 billion, India has one of the fastest growing economies in the world (Nayak, Goldar, & Agrawal, 2010). It is the eleventh-largest economy by market exchange rates, and is, at US$7.277 trillion, the third-largest by purchasing power parity, or PPP (World Economic Outlook Database, 2014). Further, India has the fastest-growing telecommunication market with the 3rd highest number of users of smartphones, behind USA and China (Lomas, 2013). Conversely, India has a chronic socio-economic imbalance and a demographic diversity that

is uniquely demonstrated through cultures, languages, values and religions. Social analytics in CRM has become one of the key ingredients in most Indian success stories, where companies providing tailor-made solutions segmenting the market through demographics and socio-economics. They also flourish through multiple channels like mobile and social media.

Professor Bose in his talk will discuss about the advancements in CRM, its application, limitations and the future of CRM in India.

3. Embedding Analytics in CRM Processes and Applications

Professor Shankararaman will lead the discussion on Embedding Analytics in CRM processes and applications.

The purpose of CRM processes and applications is to ensure that organisations know their customers better and will help to build sustainable relationships with them. CRM processes can be classified into three types namely strategic, operational and analytical. The strategic CRM processes focus on creating customer-centric business culture where investments decisions are directed towards optimizing customer value. Operational CRM processes focus on automating processes and managing workflow across the sales, marketing and services divisions. Analytical CRM processes focus on leveraging customer data to increase customer satisfaction and organisation value.

In the past, to survive in the competitive market, most organisations automated CRM processes using business process management technologies and enterprise CRM applications. However, these systems were executed independent of each other. Moreover, organisations relied purely on data collected within their in-house systems. With the proliferation of social media, a lot data regarding organisation sentiments, customer behaviour and product sentiments are available in systems outside the organisation, mostly in unstructured format.

Going forward, in order to stay competitive, organisations have to go beyond automating their CRM processes, by making them more intelligent, embedding analytics into their operational CRM processes and operational CRM applications. For this panel discussion, Professor Shankararaman will focus on integration of operational and analytical CRM processes. He will introduce the concept of embedded analytics, present various applications in CRM and a methodology for analysing CRM processes using data. He will also discuss future challenges and the associated research work in this area.

4. Making the 'real markets' the focus of CRM curricula

The panellists discussed the research and practitioner aspects of CRM innovation. Dr. Lokuge will then talk about innovative CRM curricula for graduate and undergraduate students.

Blattberg and Deighton (1996) in their HBR article stated that the cost of acquiring new customers is five times higher than the cost of retaining existing customers. As a result, a paradigm called relationship marketing was emerged creating an enormous urge for CRM

(Kotler & Armstrong, 2010). This accelerating trend of following customer-oriented practices in the industry has created an opportunity for universities to introduce a curriculum for CRM practices. Many business and information systems schools around the world embraced offering CRM as a subject. Even though it is considered as an established curriculum, it is criticized by the business community due to its detachment with the real business world. The current CRM curriculum is focused on completing a business scenario from the end-users (e.g., sales personnel, marketing personnel and customer services personnel) point of view. This functional-view approach is adequate for understanding the end-to-end business capabilities of a CRM system. For example, the curriculum covers the whole business process from master data creation to managing customer services. In between it covers areas such as campaign management, customer segmentation, lead forwarding, lead acceptance, sales methodology and customer support. Yet, it falls short to cover the technical-view of a CRM system. A real organisation configures the CRM system to align with the organisational needs, synchronizes the system with other available systems, integrates it with multiple databases and transfers data from their legacy systems. Yet, these aspects are not covered in the current CRM curriculum.

In this panel, Dr. Lokuge will discuss the avenues for expanding the CRM curriculum through three key areas; relevance, process and rigor. Further, Dr. Lokuge will discuss the limitations and challenges for introducing this new curriculum and we expect that this discussion will entice both academics and practitioners as it is important for both parties.

5. Innovating CRM with the Internet-of-Things (IoT) and In-Memory Technologies

Saj Kumar, Vice President, IoT at SAP will discuss how CRM gains value through the Internet of Things and in-memory technologies.

Both the IoT and in-memory technologies have become a buzzword in the hyper-connected technology landscape. Xia, et al. (2012, p. 1101) defined IoT as "a networked interconnection of everyday objects, which are often equipped with ubiquitous intelligence." IoT enables the communications between wide variety of objects equipped with software, electronics and sensors. These objects collect massive amount of structured and unstructured data varying from basic useful data such as customer behaviours, location details, buying patterns, to extreme data such as physiological information of a customer. According to SAP, there are 9 billion devices already connected using IoT technology and by 2020 there will be 50-75 billion devices connected, creating a market of $14.4 trillion (Stephenson, 2014). The proponents the IoT argue that it will help firms innovate CRM through (i) tracking customer and machine behaviour for real-time and automated marketing, (ii) enhancing situational awareness, (iii) sensor-driven decision analytics for selling and marketing products and (iv) by providing instantaneous/automated control and response to customer needs in complex autonomous systems.

Associated with the IoT (yet not limited to), is the extent of data being collected and analysed in the world. Here, in-memory technologies (e.g. SAP's HANA) have been endorsed as a

possible solution to address the challenges arising from 'big-data'. For example, SAP HANA is an in-memory, column-oriented, relational database management system, whose architecture is designed to handle both high transaction rates and complex query processing on the same platform. Thus, coupled with CRM, in-memory technologies purport to create a more distinctive customer experience through real-time data access, superior reporting performance and in general, by capitalizing on customer insight with zero latency. These two technologies will certainly help organisations in the Asia-Pacific region to innovate with their CRM solutions.

## Panellists

**Darshana Sedera (panel chair)** is an A/Professor at the Information Systems School at the Queensland University of Technology in Brisbane, Australia. He received his PhD from Queensland University of Technology in 2006 and has over 100 peer-reviewed publications. Highlights of his publications include the Journal of the AIS, Journal of Strategic Information Systems, the Information & Management Journal, Communications of the AIS, and Australasian Journal of IS. A/Professor Sedera is the Chief Investigator of the Australian Research Council grant on "Enterprise Systems Use" with Ephraim McLean of the Georgia State University, USA.

**Indranil Bose** is a Full Professor of Management Information Systems at the Indian Institute of Management Calcutta (IIMC). Presently he acts as Co-ordinator of the MIS Group, Co-ordinator of the Case Research Center at IIMC and Chairperson of the Postgraduate Diploma in Business Analytics. His degrees include BTech (Hons.) from the Indian Institute of Technology, Kharagpur, MS from the University of Iowa, and MS and PhD from Purdue University. He has published more than 120+ papers in well-regarded journals and international conferences. Among these most of his papers have appeared in peer-reviewed journals such as Communications of the ACM, Communications of AIS, Computers and Operations Research, Decision Support Systems, European Journal of Operational Research, Information & Management, IEEE IT Professional, Journal of Organisational Computing and Electronic Commerce and Operations Research Letters. He is frequently listed in Who's Who in the World, Who's Who in Asia, and Who's Who of Emerging Leaders. Dr. Bose serves on the editorial board of more than a dozen top-tier international journals.

**Venky Shankararaman** is a Professor of Information Systems (Education) and Associate Dean (Education) at the School of Information Systems, Singapore Management University. He holds a PhD in Engineering from the University of Strathclyde, Glasgow, UK. His current areas of specialization include business process management and analytics, enterprise systems architecture and integration, and education pedagogy. He has over 25 years of experience in the IT industry in various capacities as a researcher, academic faculty member, IT professional and industry consultant. Venky has designed and delivered professional

courses for government and industry in areas such as business process management and analytics, enterprise architecture, technical architecture, and enterprise integration. He has published over 65 papers in academic journals and conferences.

**Sachithra Lokuge** is an associate lecturer and a part of the CRM teaching team at the Queensland University of Technology, Brisbane. She received her PhD from Queensland University of Technology in 2015. She has several years of experience in working with outsourcing organisations as a business analyst. Her publications have appeared at Information & Management, Communications of AIS, AMCIS, PACIS and ACIS.

**Saj Kumar** is the Vice President of Internet-of-Things at SAP in Singapore. He has over 30 years of experience and currently he is leading the SAP's business for IoT in Asia Pacific & Japan. He is working with SAP's strategic customers in APJ to drive Industry use cases around IoT and delivering value.

## Targeted Audience

We anticipate that the panel will attract four types of participants: (i) subject area researchers who research on CRM, (ii) general participants, wanting to understand the future of an important phenomenon to the region, (iii) practitioners and (iv) subject area teaching staff who currently teach and expect to teach CRM.

Our panel will be of interest to all participants in general. CRM is one of the important phenomena for the Asia-Pacific region, with almost all nations (organisations and governments) in the region have involved in some way. Thus, both the academics and practitioners, in general, will benefit by attending the panel.

Further, there is a large group of academics, who are currently researching on CRM. Similarly, our panel will be of particular interest to doctoral students to understand the changing nature of a global phenomenon. Panellist will also demonstrate the process of theoretical derivation, application and extension – which would be appealing to PACIS participants of all interests.

The panel discussion on CRM curriculum will particularly attract both practitioners and academics. Those academics who are currently engaged in teaching CRM and also those who are planning to launch CRM courses will particularly benefit through the discussion.

Particularly, the industry thought-leaders will be attractive to practitioner attendees. Their presence will make this panel more balanced, where the academic rigor is enhanced by the relevance sought in the practice.

## Special Requirements

The panel only requires a data projector internet access and microphones for each panellist.

## Intended Venue

There is no special requirement. The panel prefer the conference venue itself.

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