



# Cloud Computing amongst Local Business Organisations: A Study

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## 1. Executive Summary

As part of its ongoing effort in the field of cloud computing and its promotion, the MCA carried out a market study of the current situation on the use of cloud computing amongst business organisations in Malta.

It is said that what cannot be measured, cannot be managed and it is with this saying in mind that the MCA carried out this survey in 2017. The aims of the survey were twofold. We wanted to get a good idea of the use and adoption of cloud computing with a particular interest in the micro enterprises business segment. This segment of the market is not normally surveyed, mostly due to its variability over a relatively short period of time however, we felt it was important for us to try to understand this particular segment also given the fact that this is the segment the MCA normally targets in its activities. The second main reason for this survey was to provide us with a way via which we can plan our activities for the coming few years ensuring we provide maximum value to the audience that needs it the most.

The survey was carried out via telephone and we aimed to talk to people who were involved in the company's day to day operation to try to gather as much a real feel of the business operation as possible. We kept in mind the audience limitations with regards to their understanding of what is essentially a new technological approach and allowed a degree of flexibility in their responses to try to gather as much information as possible.

Whilst the MCA's main focus is on micros and SMEs, we also took the time to boost the survey to cater for larger organisations. This provides us with a more complete picture of the local market whilst also allowing us to compare the segments of the market.

This study also includes the actual survey data that was collected allowing the reader to get a clearer view of the analysis as discussed in this report.

## 2. Introduction

### 2.1 The MCA vis-à-vis Cloud Computing

In 2015, Government extended the Malta Communications Authority's (MCA) remit to help augment further cloud computing adoption amongst SME and enterprise organisations. As the entity tasked with promoting and facilitating the uptake of eCommerce, the MCA considers cloud computing to be a key player in enabling transformation, growth and innovation in today's marketplace. In a world where devices are becoming intelligent, services are becoming virtual, where mobile access has the potential to reduce the negative impact on the environment and where data is gold, cloud computing will be the main engine that allows us to collect, process, store and extract knowledge. Implementing cloud computing technologies within business ultimately helps in providing the means necessary to capitalise on opportunities brought about by eCommerce.

In today's reality, the exponential increase in the use of digital technologies - which transforms the way businesses interact both from a B2C and a B2B perspective, and within the business itself - has become an indisputable truth. The benefits of going digital with the help of cloud computing are unlimited. Needless to say, going digital is highly cost effective as less office space is required due to less physical records to store, and it also involves less printing of documents since content can be made accessible online. Moreover, going digital is highly time-efficient as it makes finding information and documents easier, and enables employees to communicate efficiently and effectively, increasing collaboration within the team. Going digital also improves data security as it reduces risk of loss and theft, not to mention that a reliable cloud computing service strives to create highly secure cloud environments with robust encryption systems that can keep essential information private. Last but not least, going digital is essential to ensure that businesses remain competitive in today's marketplace allowing them to react to changing market needs in a fraction of the time that was needed in the recent past when digital technologies were not yet prevalent as nowadays.

Thus, the challenge for businesses nowadays lies in their ability to effectively realign the physical and digital whilst maintaining their standards in terms of their internal modus operandi. The MCA's aim is to mitigate the digital skills deficit and the low uptake of 'novel' aspects of technology, such as the cloud, that businesses still hesitate to implement, and are thus posing a challenge to SMEs and microenterprises. By bridging this gap, the MCA strives to ultimately increase the uptake of eCommerce in the local scenario. To reach this aim as efficiently and as effectively as possible, the MCA consolidated its efforts to take on this responsibility by setting up the Malta Cloud Forum (MCF) in 2016.

## **2.2 The Malta Cloud Forum**

The MCF is a multi-stakeholder forum of parties interested in the cloud computing eco-system, comprising representatives from consulting companies, civil society, government and academia. The MCF meets every quarter to discuss how the local uptake of the cloud amongst businesses can be facilitated. The forum's ambition is to help increase and diffuse cloud awareness, particularly amongst micro organisations and SMEs, and create an innovative local culture that supports, embraces and benefits from cloud computing. The MCF believes that the cloud computing model represents a great opportunity for business organisations of all sizes to gain access to enterprise class IT via a delivery model that is sustainable for both large organisations and micros. In turn, cloud computing allows organisations to compete and innovate in an ever-changing market via large scale resource optimisation and sharing. The MCF therefore aspires to execute this vision by proactively striving to bridge the gap between the cloud computing model and local micros and SMEs. To this end, the forum sets out to organise various initiatives associated with cloud computing and also participates in a number of cloud, eCommerce and other third-party IT events.

As part of its work-stream, the MCF regularly conducts studies of the local market with regard to the adoption of the cloud model by businesses, together with the issues and challenges that come along with the implementation of the cloud. To this end, the MCA on behalf of the MCF embarked on this study whose main objective is to analyse the current scenario of the business industry vis-à-vis the awareness and the use of cloud computing

technologies. The aims of this study are: to get an overview of the local scenario in this regard; to act as a blueprint for the MCF, mapping out its way forward and next steps in order to meet its objectives and goals; and to act as a baseline for the initiatives of the forum. Following this study, the MCF aims to address the identified matters through a number of different initiatives including: information sessions and training; events and conferences; showcasing local success stories and testimonials of businesses who have successfully migrated onto the cloud, and more.

To further strengthen the role of the MCF, in 2017 the MCA joined EuroCloud Europe (ECE), an independent pan-European cloud innovation hub comprising completely vendor neutral members whose aim is to share knowledge and maintain an open dialogue with all partners to bring IT and business together and foster and support a stimulating environment for the growth of Cloud Computing. By joining ECE, the MCA strives to use the structure, the objectives and goals, and the work streams of ECE as a baseline for the MCF by which to align an effective way forward.

### 3. Rationale behind the Study

The aim of this study is to capture both qualitative and quantitative information in order to assess the extent of awareness and usage of cloud computing among local businesses. The MCA strives to monitor a number of aspects through this survey, including knowledge and perceptions vis-à-vis the cloud, along with usage and concerns in order to devise initiatives to drive cloud adoption further based on local realities. Such initiatives include training, educational programmes, events and conferences.

## 4. Methodology

The MCA carried out the study between June and July 2017. Interviews were carried out by telephone, with calls lasting around 15 minutes. The survey respondents were chosen randomly from a number of business directories. The interviews were mostly carried out with individuals responsible for IT within the business.

The sample size was representatively distributed across different industries of the business sector in Malta (Source: NACE Codes), namely wholesale and retail trade, transportation and food, professional, scientific and support services, financial and insurance activities, construction, personal services, manufacturing, agriculture and fishing, tourism and hospitality, public administration, health and social work, real estate activities, and mining and quarrying. The interviews were carried out with businesses that have been randomly selected on the basis of this distribution, with a sample size of 419 business representatives in total.

In terms of company size, the vast majority of the sample employed in this study consists of businesses with 1-5 employees (74% of the sample size), with another 22% of the sample size consisting of businesses with 6-10 employees. On the other hand, only 2% of the sample included businesses with 11-25 employees, which would be considered as SMEs and merely 1% of the sample included business organisations with 26-50 employees. The sample did not include any organisations that comprise more than 100 employees. Given that the vast majority of the sample was made up of micros (97.4% of businesses in Malta), it was decided that in order to capture more qualitative information on medium to large size businesses it was necessary to run the survey again solely amongst the 10-49 and 50+ employees businesses. This proved to be a useful method in order to have two different analysis sets of the local uptake of the cloud amongst businesses.

Having said that, as is the case in the rest of the EU, the majority of businesses in Malta are indeed micro enterprises and thus, the initial survey provides the most representative findings when considering the local scenario. Given that the MCA continuously strives to address primarily micros and SMEs through its initiatives, the initial results serve as



a baseline for the MCA in order to incentivise the initiatives it undertakes on behalf of the MCF as a way forward.

## 5. Survey Results

### 5.1 Sample 1 – Up to 9 employees

Respondents were asked a total of 17 questions. The majority of questions were related to their knowledge on the cloud, their opinions in relation to the industry they operate in, their company's advancement towards the cloud, and the overall internal IT operations.

With regards to the original sample, when asked whether they generally seek to adopt new technology to save money, 76% out of 419 business organisations responded in the affirmative. This highlights that there is indeed interest in adapting to the technological advancements that are currently going on and embracing the benefits brought about them, and that the general belief amongst businesses is that digitisation results in cost effectiveness.

Having said that, when asked whether business organisations believe that they are knowledgeable about cloud computing technologies and services specifically, 49% - almost half the sample - implied that they are lacking in knowledge or that they feel there is room for improvement. This in fact incentivises the MCF to organise more educational programmes and informative sessions and courses in order to raise awareness on the topic under discussion, initially focusing on the 'what's' rather than the 'how's' since the target audience for the time being is business owners rather than the more technically-inclined individuals. More technical sessions are planned following the non-technical sessions.

The third question focused on the respondents' perception of the industry they currently operate in, asking whether they considered it to be moving towards cloud-based technology. A total of 40% out of a sample of 298 replied in the affirmative. Conversely, 31% do not think that their industry is moving towards cloud computing, and 29% indicated that they don't know or are unsure. The fact that almost a third of the respondents implied that they don't know whether the industry they operate in is in fact moving towards the cloud, raises the possibility that a fraction of the sample are probably new to the term 'cloud-based technology', and thus lack knowledge on the benefits of moving onto the cloud. This further

emphasises the demand for more distribution of knowledge on the cloud amongst business organisations.

When asked who is responsible for IT within their company, a staggering 32% of the businesses highlighted that they do not have anyone who is responsible for their IT operations, which indicates that such entities may not perceive IT to be of importance to their business. Having said that, 30% of the respondents identified the owner or the general manager as the person responsible for IT. The MCA strives to increase this percentage, aiming to raise the number of business owners who indeed take interest in their internal IT operations and aspire to take on the responsibility of IT within their company due to the great number of operational and strategic benefits it generates.

When asked about their level of involvement in the company's IT strategic direction and the related costs, only 36% out of a sample of 419 indicated that they are involved. A total of 27% demonstrated that they are not involved at all, and it is this pool of individuals that the MCA aims to tap into in order to change their line of thought and perception of IT. Following this, respondents were asked about the level of involvement of the engaged IT entity in the company's IT strategic direction in cases where their IT is outsourced. The sample size decreased to 26 from 419, and the majority indicated that where the IT function is outsourced, such businesses deem the outsourced IT company to be extremely involved in the business' strategic direction.

The next question focused on future plans in relation to the business organisations' IT infrastructure. The vast majority of the businesses (64% out of a sample of 419) claimed that they do not use cloud computing and do not plan to make use of it in the near future. In fact, only 3% claimed to be planning to make use of such technologies, and specifically mentioned Sharepoint, Microsoft Active Directory, ERP and Office 365. The remaining third indicated that they do make use of cloud computing technologies as part of their IT infrastructure.

Those who are not making use of cloud computing (270 out of 419) were asked what their major blocker towards it is (organisations could give more than one reply). The vast

majority of these are of the belief that cloud computing is not of benefit to their business (92%) – another indication that most of the business organisations chose was that they did not have enough knowledge on the topic. To further substantiate this, lack of technical knowledge was also indicated as a main barrier (39%). Out of the 11 that stated that they do plan to introduce cloud computing to their organisation, 82% plan to do so in the short term. Having said that, this shows that only 2.6% plan to introduce cloud computing to their business.

Out of the 138 business organisations from the original sample that currently do make use of cloud computing technologies, almost all of them indicated that they make use of private cloud solutions rather than public. This raised the suspicion that the question was not understood in the first place as public cloud solutions are much more prevalent and less costly. This sheds further light on the need for more disbursement of knowledge on the cloud amongst businesses. The majority of business organisations from the same sample (98%) indicated that they use Software as a Service (SaaS) rather than Infrastructure as a Service (IaaS) when it comes to cloud computing technologies.

Those who indicated that they make use of SaaS were asked to specify the services that they are currently using, given a choice between Microsoft Office 365, Google Apps, Google Drive, Onedrive, Dropbox, iCloud and Sharepoint Online. It was noted that businesses are mainly using Dropbox (45% of the total 135) and Google Drive (38%). Onedrive ranked third. The remaining 5 businesses out of the 138 that are on the cloud indicated they use IaaS either use Amazon EC2 or Windows Azure.

Business organisations were then given a list of benefits that are brought about when purchasing cloud computing services and asked to choose the ones that they deem most beneficial (respondents could choose more than one answer). As a result, businesses seemed to perceive that the main advantages of purchasing cloud computing relate to 'mobile and ubiquitous access to IT applications and services' (58% out of 242) and 'storage and backup' (37%). One fourth of businesses also mentioned 'improved IT efficiency and agility'.

On the other hand, when asked about the issues that they are concerned about when purchasing cloud computing services, their main issues seemed to relate to 'physical and network security' (60% out of a sample of 131) and the fact that 'cost does not justify the investment' (33%). Other concerns primarily revolved around internet connectivity and reliability. Here, organisations could also give more than one reply.

Respondents were then asked to rank the 3 main areas that they feel are most important in order to support cloud-based decisions. Among the businesses that responded to this question (227), 'security, privacy and data protection issues' was the main area. Responses were weighted such that 1st indicated that the issue attained more importance than issue/s ranked 2nd and 3rd (weighting was as follows: 1st indicated issue was given a weighting of 3, 2nd indicated issue was given a weighting of 2 and 3rd indicated issue was given a weighting of 1).

The participants were then asked whether their organisation would be interested in attending training and events related to the use of cloud technologies, and a third of the businesses indicated that they would be willing. However, almost half of the businesses indicated that they were not interested – the figure of which relates to the 31% of businesses that are of the opinion that the industry they operate in is not moving towards cloud based technology. This poses a challenge for the MCA to generate interest amongst businesses in the cloud, and indicates that the MCA needs to find means by which to entice businesses to become more informed on the cloud, and the need to attach a business value to the training and events organised.

## **5.2 Sample 2 – 10 or more employees**

As indicated in section 4, the survey was boosted amongst business organisations with 10-49 and 50+ employees businesses only, to capture more qualitative information on medium to large size businesses. Overall, it was evident that the medium to large size businesses are far more likely to be inclined to invest in ICT and deem such investment to be

beneficial to their business, as shall be discussed further in the analysis. The general size of the second sample was made up of 140 respondents.

Similar to the original sample, the vast majority of the businesses interviewed within this cluster (95%) seek to adopt new technology in order to save money. However, only 10% of the sample indicated that they are not knowledgeable about cloud computing technologies and services; contrary to the 51% of the original sample.

Moreover, whereas 31% of the original sample did not consider the industry they operate in to be moving towards the cloud, the majority (79% of 109) are of the opinion that the industry they operate in is in fact moving towards the cloud. Furthermore, half of the entire sample size indicated that they have an internal IT department running the IT of the company, contrary to the 32% of the original sample which indicated that no one is responsible for IT in the organisation they operate in.

On the other hand, like the original sample, the second sample indicated that in the cases where their IT is outsourced from third-party IT entities, the latter are extremely involved in the business's strategic direction (77% of respondents). Yet contrary to the original sample, 39% of the second sample highlighted that they are themselves involved in the company's IT strategic direction. Unlike the original sample, the majority of the businesses surveyed in the second cluster were already making use of cloud computing technologies (63%).

In fact, only 45 out of 140 were not making use of cloud computing, 89% of which indicating that their main blocker was the fact that they do not see benefit in moving onto the cloud. Moreover, when asked whether respondents make use of private or public cloud solutions, it seemed that like the original sample, the majority misunderstood the question under review as all respondents (88) indicated that they make use of private cloud solutions. This highlights that even amongst medium to larger-sized business organisations, there is still room for improvement in terms of dissemination of information related to the advantages of the cloud. However, when compared to the micro enterprises, the number of organisations that are not on the cloud is much less than the larger organisations, which justifies the fact

that the main target audience of the training and events organised by the MCA is micro enterprises and SMEs.

Similar to the original sample, the vast majority of respondents also indicated that they make use of SaaS rather than IaaS, and that they are mainly using Dropbox, Google Drive, and Onedrive, respectively. The second sample indicated that amongst the IaaS services available they are mostly making use of Windows Azure and Rackspace. Moreover, similar to the original sample businesses seemed to perceive cloud computing to be beneficial in relation to 'mobile and ubiquitous access to IT applications and service' (59%) and 'storage and backup' (38%). 'Improved IT efficiency and agility' ranked third with 27% responses. The issues they are mostly concerned about when it comes to purchasing cloud computing services are also similar to the original sample, with 'physical and network security' (70%) as the main issue raising concern. Moreover, like the original sample, when asked to rank the three main areas they feel they need support on regarding cloud-based decisions, respondents (56 out of 14) felt that 'security, privacy and data protection issues' were the main areas.

Lastly, a positive 53% indicated that they would be interested in attending technical and/or business training events related to the use of cloud technologies.

## 6. Findings and Way Forward

This study provided the MCA with an insight into the current knowledge and plans of local business organisations with regards their approach to Information Technology with a focus on cloud computing. Cloud may represent a new frontier to most organisations at present however, it is actually a well-grounded model that represents one of the largest investment areas in IT worldwide. All the major technology providers have shifted their service delivery model to the cloud and this pace is expected to intensify further as traditional, on-premises systems implementations are expected to be drastically reduced over the next few years.

Cloud computing offers a great opportunity for the smallest of organisations to tap into enterprise class software solutions at a fraction of the cost it would have cost just a few years ago. This allows the said small organisations to be able to compete in a more effective manner using tools that were simply out of their reach, by adopting a cloud, operational expenditure (OPEX) based model that they can sustain.

Moving forward, the MCA will aim to address the gaps and issues identified in this study over the coming few years. In 2018, the MCA delivered numerous technology related information sessions with this study's findings in mind. An example would be the FastTrak sessions whereby we adopted a rapid delivery approach to cater for attendees who cannot attend long winded, theoretical training programmes due to their tight schedules particularly when these attendees are managing their own business operation as it usually the case. The MCF Business Breakfast held in September 2018 was also targeted towards business owners and influencers to try to focus on the possibilities that are brought by the cloud to any business operation.

The MCA plans to proceed along these lines in the foreseeable future to better cater for the industry needs and requirements.