



Department of Communication and Information

Marketing and Communications Strategy

29 March 2018

Prepared by





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Analysys Mason Limited
North West Wing, Bush House
Aldwych
London WC2B 4PJ
UK
Tel: +44 (0)20 7395 9000
london@analysysmason.com
www.analysysmason.com
Registered in England No. 5177472

1 Introduction

The Department of Communications and Information (DCI) is the agency within the Government of Papua New Guinea (GoPNG) responsible for developing government policy on ICT, and for "coordinating awareness and dissemination of government development information to our citizens, particularly those in rural areas". However, the DCI is currently facing significant capacity issues, limiting its ability to perform its duties. In particular, the DCI has vacancies in key positions within the Information and Public Affairs division, limiting the capacity for stakeholder engagement and the ability to develop and implement successful marketing and communications strategies.

Consultancy firm Analysys Mason has been engaged to support the institutional strengthening of the DCI.² As part of this engagement, Analysys Mason, in consultation with the DCI and key departments within GoPNG, has prepared a high-level marketing and communications strategy for the DCI to implement over the next year. This strategy aims to provide the DCI with i) a structured approach to stakeholder engagement across a range of target audiences, and ii) a framework to support the development of future marketing and communications strategies.

This document summarises the main aspects of the DCI's marketing and communications strategy. It is laid out as follows:

- Section 2 outlines a framework to be used by the DCI for developing future marketing and communications strategies.
- Section 3 presents a near-term marketing and communications strategy for the DCI.

DCI (2014), Corporate plan 2015–2020; see http://bit.ly/2DIkbdK

This engagement forms part of the Rural Communications Project funded by the World Bank.

2 Framework for developing marketing and communications strategies

The DCI will be responsible for maintaining and updating this marketing and communications strategy, and for developing future strategies in response to industry changes and new communications requirements. This section presents a high-level framework to guide the development of future strategies by the DCI. This framework has been used as the basis for developing the near-term marketing and communications strategy presented in Section 3.

A marketing and communications strategy provides a structured approach for raising awareness of a key issue, or sets of issues. The strategy should have an overarching aim, and a set of objectives should be established to support the overarching aim. The strategy should be targeted: its audience should be segmented into groups with similar communications objectives, and key messages should be designed for each segment of the target audience.

Analysys Mason has developed an outline process for developing a marketing and communications strategy based on a review of international best practice for government communications, including frameworks used by the governments of the UK – a world leading government for government communications – and Fiji – a comparable Pacific Island country. This process can be broken down into three stages, as shown in Figure 2.1 below.

Figure 2.1: Framework for developing and implementing a successful marketing and communications strategy [Source: UK Cabinet Office, Fiji e-government Masterplan, Analysys Mason, 2018]

Stage	Actions
Scope	? Define objectives? Establish a timeline for delivery? Identify target sectors and segments
Develop	? Establish keymessages for each demographic? Identify suitable communications channels and timelines? Develop an implementation plan
Implement, monitor and evaluate	? Implement the strategy? Monitor progress of the strategy? Evaluate strategy effectiveness and identify areas for refinement

2.1 Scope

The first stage in the development of a marketing and communications strategy is to define the overarching aim of the strategy, and establish the objectives to support that aim. The timeline for delivery of the strategy, and available resources, should also be identified (at a high level), to demarcate the scope of the strategy and ensure achievable targets are set.

Identifying target sectors is another important step in the development of a marketing and communications strategy. These sectors may be broad (e.g. government, businesses, citizens), and so stakeholders in each sector that share similar characteristics and requirements should be identified and grouped together into a 'segment'.

2.2 Develop

Key messages should be developed for each segment of stakeholders. Working at the segment level, rather than at the sector or individual level, allows messages to be targeted at a sufficient level of detail to be relevant to each group of stakeholders.

Suitable communications channels, and a timeline for delivery of the strategy, should be established for each segment. These, combined with the key messaging, will form the basis of the implementation plan for the strategy. The plan should also include monitoring and evaluation criteria to evaluate the implementation, impact and effectiveness of the strategy.

2.3 Implement, monitor and evaluate

Once the strategy has been finalised, it should be implemented based on the implementation plan developed in the previous stage. The implementation should be regularly monitored against the implementation plan to ensure that milestones are met, and if necessary the plan should be updated to reflect changes in the status of implementation (e.g. unexpected delays or quicker-than-expected progress).

The effectiveness of the strategy should also be evaluated during and after the implementation period using carefully targeted metrics. This will allow the DCI to understand the impact of the strategy, and to identify challenges during its implementation. These lessons can then be used to guide the development of future strategies.³

A monitoring and evaluation framework was provided to the DCI on 12 October 2017 – *Policy framework and monitoring and evaluation framework* (Ref no: 20009803 – 184).

3 Marketing and communications strategy

The DCI aims to undertake a public information campaign to promote the ICT sector in PNG, and to promote the development and take-up of digital services by government, businesses and citizens in PNG. Analysys Mason has prepared a high-level marketing and communications strategy ('the strategy') to support the DCI's efforts. The strategy has been designed to be implemented over a one-year period.

The remainder of this section presents:

- the aims and objectives of the strategy
- the strategy's target audience and segmentation
- key messages
- communication channels
- the suggested frequency of communications
- an implementation plan
- suggested monitoring and evaluation criteria.

It should be noted that a marketing and communications strategy is a living document. Stakeholder engagement should be considered a two-way dialogue, and the strategy should be adjusted based on the feedback received from stakeholders and the outcomes measured using monitoring and evaluation practices, and should reflect the evolving situation in PNG's ICT sector.

3.1 Aims and objectives

The DCI's overall mission statement is as follows:

"Enabling the use of appropriate and affordable digital technologies in Papua New Guinea, for the benefit of all"

The DCI will work to deliver against this mission and promote the development of the ICT sector in PNG through a combination of policy development and targeted activities. However, a key step is to deliver targeted, effective communications to support the development of the sector and explain the roles of the DCI to GoPNG, businesses and citizens. Stakeholder engagement, via marketing and communications, is a crucial part of the DCI's work to drive progress against its mission statement.

The strategy provided here aims to provide the DCI with a clear approach to stakeholder engagement in the next 12 months. It has been developed in consultation with the DCI to target a range of stakeholders across GoPNG and the ICT industry. The strategy has three overarching aims:

- to promote the use of the Integrated Government Information System (IGIS)
- to increase awareness of the ICT sector and the benefits of using ICT, and

This mission statement was adopted as part of the ICT sector roadmap provided to the DCI in an Analysys Mason report on 29 March 2018 – *ICT sector roadmap* (ref. no. 2009803-125)

• to provide practical information on how to use digital services safely.

To support these aims, the strategy has five key objectives, as summarised in Figure 3.1 below.⁵



Figure 3.1: Objectives of the marketing and communication strategy [Source: Analysys Mason, 2018]

3.2 Target audience and segmentation

The target audience for the strategy has been broken down into three broad groups. Each target group has different interests in ICT and different motivations for using ICT services, and each of them will require different engagement channels and messaging to achieve maximum impact. Communications with the key groups targeted by the strategy can be described as:

- Government to Government (G2G) communications between the DCI and different departments and agencies within GoPNG.
- Government to Businesses (G2B) communications between the DCI and businesses, considering both suppliers and users of ICT services.
- Government to Citizens (G2C) communications between government agencies and PNG citizens.

Each target group is further segmented into 11 smaller segments, as shown in Figure 3.2 below. These segments have been identified as important target audiences for the strategy, and reaching each of these groups with targeted messages is key to achieving the strategy's overall aims and objectives.

Target group	Segmentation
	The National Executive Council (NEC)
G2G	Heads of government agencies
GZG	 ICT managers in government agencies
	Civil service officers
	• ICT companies
	Large enterprises in PNG
G2B	 Small and medium enterprises (SMEs) and micro- enterprises in PNG
	 International companies and investors

Figure 3.2: Segmentation of the strategy's target audience [Source: Analysys Mason, 2018]

Promoting take-up of the IGIS has been identified as the highest priority for the strategy as this objective is likely to have the highest impact on the status of ICT within GoPNG, and also due to the potential for large cost savings.

• Active users of ICT
G2C
• Youth and students

· Rural communities and the digitally excluded

It is important to note that, while all 11 segments identified in Figure 3.2 above are important for the successful delivery of the strategy's aims and objectives, three of these segments (highlighted in blue in the table above) have been identified as high priority, based on their critical role in driving the take-up and usage of ICT in PNG (see Section 3.6.3 below):

- The NEC is a key decision-making body within GoPNG. Any policies, for example relating to cyber-security or e-government, will require both approval and funding from the NEC to succeed. Obtaining support from the NEC, and ensuring continued support for the implementation of these policies, is key to the success of the strategy.
- ICT companies will be responsible for developing many of the new digital infrastructure and services required, and for promoting safe and effective usage of the services. Providing these companies with sufficient information and support to drive adoption of the required standards is a key step in providing PNG with new digital services, stimulating demand and growing the ICT sector.
- Active users of ICT are those most at risk in the short term from poor cyber-safety practices, and those who will benefit from up-to-date information on best practice in the safe use of digital services. Longer term, active users are likely to be 'influencers' who can help new users develop best practice when learning to use digital services.

3.3 Key messages

This section provides suggested key messages for each segment of the target audience, along with a discussion of the different approaches required for G2G, G2B and G2C communications. While each segment will require different messages and communication channels, a coherent approach is required to communications across the ICT sector in PNG to promote growth in both the supply and demand of services.

High-level key messages have been developed for each segment of the target audience. These messages summarise the core ideas that the DCI is aiming to communicate, and should form the basis of targeted messages with appropriate details of PNG's ICT sector and government plans. Several points within the strategy where the DCI should provide details of ongoing programmes have been highlighted using bold, square brackets and italics (e.g. – [details of support programmes to be provided]).

It is important to note that the key messages are unlikely to remain static and should be revised as the ICT market in PNG develops. The strategy should be considered part of a two-way discussion with key stakeholders rather than simply information sharing. By establishing a dialogue with stakeholders, the DCI can build relationships in the sector and obtain new insights as well as identifying key issues and new objectives.

3.3.1 G2G

Communications between the DCI and government departments are aimed at building support within government for ICT programmes and policy initiatives, as well as promoting the take-up and safe usage of ICT services by government users. G2G communications require a flexible approach, with the messaging and delivery channel dependant on the position of the target audience within government:

- Communications with the NEC should focus on high-level economic impacts and the
 relationship between ICT and national development, in order to raise the profile of ICT and the
 importance of the DCI's role in national planning and budgeting, and to support the approval of
 new ICT programmes and policies.
- Communications with heads of agencies and departments within GoPNG should focus on both expected long-term impacts of ICT, and on operational issues such as implementation, budget implications and day-to-day operations.
- Communications with ICT managers are likely to be similar to those with heads of agencies and departments within GoPNG, but more focussed on operational issues and inter-departmental collaboration (e.g. messaging may focus on the implementation of the proposed e-government policy):
 - the DCI should collaborate with ICT managers in each department to develop a detailed understanding of individual requirements and fine-tune messaging accordingly
 - communications are likely to focus on migration to the IGIS and on implementation of the guidelines and standards contained in the e-government policy.⁶
- Communications with civil service officers should focus on the impact that ICT may have on their day-to-day work, such as simplified processes and information sharing inside and outside government:
 - communications are likely to focus on migration to the IGIS and ensuring best practice in the use of government ICT systems is followed.

While the key themes will remain constant across the different levels of government, messaging should be adjusted for individual departments to ensure relevance. Suggested key messages for G2G marketing and communications are shown in Figure 3.3 below.

Figure 3.3: Key messages for G2G marketing and communications [Source: Analysys Mason, 2018]

Segment	Key messages	Suggested channels	
The NEC	 Government investment in ICT can have a positive return on investment, with significant economic benefits A fully resourced and empowered DCI can deliver harmonised ICT policy across government ICT can be an important tool in meeting the United Nations 	Email newsletterPrinted newsletterIn-person briefings	

Analysys Mason understands that a draft e-government policy is currently being developed by the DCI. Appropriate details from this policy should be included in G2G communications under the marketing and communications strategy.

Segment	Key messages	Suggested channels
	 development goals (for example, by increasing access to education) Incorporating ICT in healthcare, education and other public services can improve service delivery, increase social inclusion and lower costs Delivery of public services via ICT can drive efficiencies across government (for example, by providing economics of scale during procurement) 	
Heads of agencies and departments	 Using ICT to deliver public services can result in long-term cost savings and efficiencies Citizen engagement and transparency can be increased through the use of ICT Migrating to the IGIS can reduce the cost of delivering ICT projects and simplify inter-departmental collaboration The IGIS should be adopted in line with government guidelines and best practice to ensure interoperability with other government departments and long-term sustainability of the system Training civil service officers in best practice when using the IGIS, including Internet and email safety, is a critical step in ensuring the security of government ICT services 	 Email newsletter Printed newsletter In-person briefings
ICT managers	 Migrating to the IGIS can reduce the cost of delivering ICT projects and simplify inter-departmental collaboration The IGIS should be adopted in line with government guidelines and best practice to ensure interoperability with other government departments and long-term sustainability of the system Training civil service officers in best practice when using the IGIS, including the internet and email safety, is a critical step in ensuring the security of government ICT services ICT managers have a key role to play in managing migration to the IGIS and providing training and support throughout the department 	 Email newsletter Printed newsletter In-person briefings
Civil service officers	 Effective use of ICT can simplify the role of civil service officers, making engagement with other government departments and with citizens easier Best practice when using ICT, including emails and the Internet, is a critical step in ensuring the security and safety of government ICT services 	Email newsletterEmail campaignPrinted newsletterTraining sessions

3.3.2 G2B

Communications between the DCI and the business community are aimed at developing both the supply of digital services and increasing demand and safe usage of digital services from businesses:

- **ICT companies and ICT investors** should be targeted to develop the supply side of PNG's digital economy, promoting the development of services that are specific to the needs of PNG.
- **All enterprises** should be encouraged to take up new ICT services, and to use ICT services to increase engagement with other businesses and consumers.

Suggested key messages for G2B marketing and communications are shown in Figure 3.4 below.

Figure 3.4: Key messages for G2B marketing and communications [Source: Analysys Mason, 2018]

Segment	Key messages	Suggested channels
Technology companies	 PNG has a growing population with increasing penetration of the Internet and ICT, particularly mobile, creating an attractive market for ICT services The government is prioritising ICT as a tool to drive social and economic development There is a market gap for solutions designed to meet the specific needs of the PNG market, making PNG an attractive market to develop and deploy new technological solutions The government is supporting technology companies to develop new and innovative solutions for the PNG market by [insert details of support programmes] 	 Email campaign In-person briefings Public seminars
International investors	 PNG has a growing population with increasing penetration of the Internet and ICT, particularly mobile, creating an attractive market for ICT investment The government is prioritising ICT as a tool to drive social and economic development, making PNG an attractive market to invest The government is supporting inward investment in technology companies and services by [insert details of support programmes] 	Email campaignEmail newsletterIn-person briefings
Large enterprises	 Using ICT to deliver services is increasingly becoming expected by consumers ICT can deliver long-term cost savings, and improve the efficiency of service delivery Using digital marketing can significantly improve consumer engagement at a much lower cost than traditional media Adopting new technologies may open new business opportunities Safe use of ICT, ensuring cyber-security, is key to building consumer trust and a vibrant digital ecosystem [insert details of cybersecurity best practice] The government is actively supporting large enterprises in adopting new technologies by [insert details of support programmes] 	 Email campaign Email newsletter Public seminars Training events
SMEs and micro- enterprises ¹	 Using digital marketing can significantly improve consumer engagement at a much lower cost than traditional media, allowing rapid growth of new services ICT can allow new business models to be explored, potentially reaching new customers and opening new streams of revenue The government is prioritising ICT as a tool to drive social and economic development, making PNG an attractive market to launch new services Safe use of ICT, ensuring cyber-security, is key to building consumer trust and a vibrant digital ecosystem [insert details of cybersecurity best practice] The government is actively supporting SMEs involved in developing and adopting new technologies by [insert 	 Social media Email campaign Printed newsletter Public seminar Digital hub / community outreach Radio / television broadcast Newspaper advertisement

Segment	Key messages	Suggested channels		
details of support programmes]				
1 The appropriate channel will depend on whether on SME is currently using ICT corriege				

¹ The appropriate channel will depend on whether an SME is currently using ICT services

3.3.3 G2C

Communications between government and citizens should be aimed at promoting the take-up and safe usage of ICT services. There are three key segments targeted within G2C communications:

- Active users of ICT services can be targeted using electronic channels, allowing rapid
 engagement with many people. Active users are likely to be effective communicators of the
 benefits of ICT. For example, instilling best practice in active users within rural communities is a
 potential route to increasing demand within a community and ensure best practices spread quickly
 throughout PNG.
- Youth and students should be targeted through schools and universities. They tend to be early adopters of new technologies and can support friends and family using ICT services. Longer term, a digitally literate youth will create an ICT-ready workforce. They should be introduced to ICT services as early as possible and taught best practices in cyber-security and cyber-safety. This approach is likely to create sustained growth in the demand for ICT services and provide businesses with confidence that there will be a sustainable addressable market in PNG.
- Rural communities and the digitally excluded should be targeted through 'traditional' communications channels to introduce government training programmes for ICT and the benefits of using digital services. Given the lack of an online presence in rural communities, and the challenges in reaching many of these offline communities, engaging with the digitally excluded is likely to require significant effort as well as collaboration with other government departments.

Suggested key messages for G2C marketing and communications are shown in Figure 3.5 below.

Figure 3.5: Key messages for G2C marketing and communications [Source: Analysys Mason, 2018]

Segment	Key messages	Suggested channels
Active users of ICT services	 The government is prioritising the growth of the digital sector through [insert details of ongoing programmes] Accessing services online can make interactions with government simpler and improve access to services The government is now providing access to services online [insert details of services] which can be accessed using [insert details of website/other access methods] 	Email newsletterPublic seminarSocial media
	 Ensuring safe use of ICT services is critical to keeping personal information safe and avoiding fraud online. [Insert details of where advice can be found] Sharing ICT skills with friends and family can help others to enjoy the benefits of ICT 	

Segment	Key messages	Suggested channels
Youth and students	 Ensuring safe use of ICT services is critical to keeping personal information safe and avoiding fraud online. [Insert details of where advice can be found] Using ICT can open new opportunities, both personal and professional ICT skills are increasingly seen as a basic need for jobs [Insert details of where training can be found] Developing advanced ICT skills can provide secure employment opportunities and help develop the national economy [Insert details of where advanced training can be found] 	 Training sessions Public seminar Social media
Rural communities and the digitally excluded	 The government is supporting training in the use of ICT services through [insert details of programmes] Accessing services online can make interactions with government simpler and improve access to services Using digital services can open new opportunities, both personal and professional, improving quality of life Ensuring safe use of ICT services is critical to keeping personal information safe and avoiding fraud online [Insert details of where advice can be found] 	 Printed newsletter Public seminar Training session Digital hub/community outreach Radio/television broadcast Newspaper advertisement

3.4 Communications channels

The selection of appropriate delivery channels for marketing and communications is a key decision. While reaching the largest-possible audience is often an important goal, a balance must be found between the expected reach, the financial cost and the effort required to use a specific channel.

Communications channels can be considered in terms of the following five distinct categories:

Electronic channels	Electronic channels, such as email, social media platforms and Google AdWords, are relatively inexpensive. They are targeted at highly specific segments to deliver audience-specific key messages: • the reach of these channels is limited to those already using ICT services, and any electronic campaign is unlikely to reach digitally excluded communities.
Broadcast broadcast television and radio advertising require either specialist to collaboration (e.g. with the National Broadcasting Corporation, NBC) their full potential, and will potentially require significant financial deliver a communications campaign:	

Google AdWords is an advertising service provided by Google allowing adverts to be displayed against specific search terms

	• television and radio advertising (in PNG) will have a very wide reach, and can be effective for all stakeholder groups.
Physical channels	Physical media, such as newspapers and printed newsletters, potentially require a significant financial outlay to produce, print and distribute, but can be very effective distribution channels:
	• newspapers have a wide reach in PNG, and adverts or editorial content can be used to reach large number of stakeholders who are not currently using digital technologies.
In-person communications	Face-to-face communication can be a highly effective way of reaching stakeholders, but is very resource-intensive, and requires significant amounts of time to prepare and implement an effective campaign: • delivering in-person communications on a large scale would require a network of individuals that are suitably skilled and informed to deliver the messaging effectively.
Channel partners	 Channel partners can be used as part of a communications strategy to help broaden the reach of messaging and increase the impact of the strategy: for example, media partnerships to obtain editorial coverage of key topics and priorities in newspapers and online can significantly increase the impact of messaging, especially in a market such as PNG where newspapers have a broad and influential readership. Partnerships with government agencies such as the Department of Provincial
	and Local Level Government Affairs can help to propagate messaging to citizens across the country.

Figure 3.6 below introduces a range of potential communications channels and channel partners and discusses their suitability for communicating with segments of the target audience for the strategy.

Figure 3.6: Summary of communications channels and suitable target audiences [Source: Analysys Mason, 2018]

	Channel	Definition		Suitability	
c	Social media	Targeted adverts on social media platforms			G2C
о по-гови	Email campaign	Topic-specific email campaigns to subscribers	G2G	G2B	G2C
Ē	Electronic brochure / newsletter	E-brochure or e-newsletter sent to subscribers and available online (if appropriate)	G2G	G2B	G2C
tsacdao B	Radio broadcast	Public service broadcast on one or several topics on national radio		G2B	G2C
В	Television broadcast	Public service broadcast on one or several topics on television		G2B	G2C
	Newspaper advertisement	Advertisement on a single topic placed in a national newspaper		G2B	G2C
B	Printed brochure / newsletter	Physical brochure or newsletter delivered to subscribers and left in public places (if appropriate)	G2G	G2B	G2C
	In-person briefing	Briefing delivered to targeted stakeholders	G2G	G2B	
n os r	Training session	Training session delivered to a group of invited stakeholders	G2G	G2B	G2C
now-ep n	Publicseminar	Briefing delivered at a forum open to the public		G2B	G2C
	Digital hub / community outreach	Training session or briefing delivered in locations targeted at hard-to-reach stakeholders		G2B	G2C
-ennanc	Government agencies	Materials to be distributed by partner government agencies (e.g. CERT)	G2G	G2B	G2C
-ennanc Steatrap	Media	Editorial coverage and articles in print media and online covering relevant material	G2G	G2B	G2C

3.5 Frequency of communication

Figure 3.7 below shows a framework developed by the UK Cabinet Office⁸ to guide the process of segmenting an audience based on the level of influence and the level of interest the stakeholder has in the successful implementation of the initiative. This framework links the audience segmentation to the importance of each segment to the delivery of the objectives, and to the frequency of communications suggested, in order to ensure sufficient engagement with each segment.

Figure 3.7: Stakeholder segmentation and frequency of communication [Source: Analysys Mason, 2018]



Figure 3.8 below places the segmented target audience of the strategy in the context of the framework above. It details the overall aims of communications with each segment, and provides high-level suggested content and suggested frequency of communications for each of the four groups of stakeholders.

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See http://bit.ly/2FeRK9f

Figure 3.8: Suggested content and frequency of stakeholder communications [Source: Analysys Mason, 2018]

Group type	Target segments	Communication aims	Suggested content	Suggested frequency
Key players	The NEC ICT companies Active users of ICT	To provide sufficient detail to inform decision-making and ensure buy-in	 Economic, financial and social implications for proposed activities High-level implementation plans and updates High-level ICT sector updates Communications should be tailored to each stakeholder Detailed implementation and operational information should be avoided 	As often as required, minimum every two weeks
Active consultation	 ICT managers in government agencies Large enterprises in PNG Youth and students 	To provide detailed information to obtain buy-in and ensure regular feedback is provided	 Detailed impact assessment of proposals, tailored to the target segment Implementation plans, and progress towards implementation Current challenges Suggested actions by stakeholders 	• Minimum monthly
Maintain interest	 Heads of government agencies SMEs and microenterprises in PNG Civil service officers 	To provide sufficient information to ensure awareness and buy-in, while avoiding information overload	 High-level operational and implementation updates Notification of any changes or updates to plans Summary of impacts to date / expected impacts Information on new developments / opportunities 	Minimum monthly
Keep informed	 International companies and investors Rural communities and the digitally excluded 	 To keep informed of developments and potential impacts, trying to attract interest 	 Promotional material for services / the ICT sector Information on the potential benefits of ICT Sector news and updates 	Minimum every three months

3.6 Implementation plan

To support the delivery of the strategy, we have prepared a high-level implementation plan for the DCI. We suggest that the DCI split the implementation plan into two phases:

- **Detailed planning phase** the DCI should finalise the detailed messages, confirm the required communication channels and develop electronic and print media to be distributed.
- Implementation phase the DCI should carry out the campaign activities, including distributing the electronic and printed material, organising face-to-face meetings as appropriate, and ensuring that outcomes of the strategy are measured to allow future refinements.

A draft implementation plan is presented in Figure 3.9 below. The plan identifies a set of suggested actions that the DCI should take during the implementation of the strategy.

Figure 3.9: Implementation plan for the strategy [Source: Analysys Mason, 2018]

Action ID	Action	Target	Target completion	Data source
ACT1	Finalise messaging for all target segments	100%	Within 1 month of commencement of the strategy	DCI
ACT2	Survey on the current status of the ICT sector within target segments	1 survey	Within 1 month of commencement of the strategy	DCI, [partner agencies]
ACT3	The NEC to receive a briefing note on the potential of ICT and the digital economy, and the DCI's role	1 briefing note	Within 1 month of commencement of the strategy	DCI
ACT4	The NEC to receive updates on adoption and use of the IGIS	Update provided monthly	Within 1 month of commencement of the strategy	DCI
ACT5	Heads of agencies and departments to receive an information pack or face-to- face briefing on the IGIS and ICT within government	100%	Within 3 months of commencement of the strategy	DCI
ACT6	ICT managers to receive an information pack or face-to-face briefing on the IGIS and ICT within government	100%	Within 4 months of commencement of the strategy	DCI
ACT7	Civil servants to be provided with an information pack on use of the IGIS within their department and benefits	100%	1 month before department migration to the IGIS ¹	DCI
ACT8	DCI to provide civil servants with a newsletter on latest status of IGIS and e-government programmes	100%	Monthly after commencement of the strategy	DCI
АСТ9	Key technology companies	-	Within 3 months of	Bank of PNG, NICTA,

Action ID	Action	Target	Target completion	Data source
	in PNG to be identified		commencement of the strategy	Department of Treasury
ACT10	Targeted companies to be provided with communications promoting potential opportunities for growth and the development of new services	100%	Within 6 months of commencement of the strategy	DCI
ACT11	Face-to-face meetings with targeted companies to identify plans, discuss cyber-security and promote PNG as a market	100%	Within 12 months of commencement of the strategy	DCI
ACT12	Key potential international investors in the PNG ICT sector to be identified	_	Within 3 months of commencement of the strategy	Bank of PNG, Department of Foreign Affairs
ACT13	Targeted investors to be provided with communications promoting PNG's ICT sector and government plans for growth of digital economy	100%	Within 6 months of commencement of the strategy	DCI
ACT14	Targeted investors to be invited to face-to-face meetings with key DCI and GoPNG personnel to promote investment	100%	Within 12 months of commencement of the strategy	DCI
ACT15	Criteria established to identify large enterprises to be targeted	-	Within 5 months of commencement of the strategy	DCI, Department of Treasury, National Information & Communications Technology Authority (NICTA), Bank of PNG
ACT16	Communications material to be sent to targeted enterprises	100%	Within 8 months of commencement of the strategy	DCI
ACT17	Communications material for SMEs to be developed and distributed to local hubs (e.g. DPLG community centres)	100% of hubs provided with material	Within 8 months of commencement of the strategy	DCI
ACT18	Public forum to be organised for large enterprises and SMEs to promote ICT and cybersecurity	1 forum held	Within 12 months of commencement of the strategy	DCI
ACT19	Online marketing programme designed to promote cyber-security practices to active users	-	Within 3 months of commencement of the strategy	DCI, NICTA
ACT20	Online marketing programme targeting active	_	Within 4 months of commencement of	DCI

Action ID	Action	Target	Target completion	Data source
	users to be delivered via email, social media and other appropriate channels		the strategy	
ACT21	Communications targeting youth and students on safe use of digital services to be developed	-	Within 7 months of commencement of the strategy	DCI, Department of Education (DoE)
ACT22	Material promoting safe use of digital services to be distributed to students	80%	Within 11 months of commencement of the strategy	DCI, DoE
ACT23	Communications material promoting benefits of ICT services to be developed and distributed to local hubs (e.g. DPLG community centres)	100% of hubs provided with material	Within 11 months of commencement of the strategy	DCI, DPLLGA
ACT24	Survey of enterprises, SMEs and citizens to evaluate the impact of the strategy on ICT usage	[To be confirmed] ²	1 year after commencement of the strategy	DCI

¹ This activity is linked to the adoption of the IGIS network across government (see the ICT sector roadmap for further details)⁹

3.6.1 Opportunities for intra-governmental co-operation

To maximise the impact of the strategy, the DCI should aim to collaborate with relevant government agencies to leverage their experience, contacts and communication channels. Based on stakeholder consultations, we suggest that the DCI should explore collaborations with the following departments as channel partners:

- The Department of Provincial and Local Level Government Affairs (DPLLGA) The
 DPLGA has a network of contacts and community hubs in the more than 6000 wards in PNG.
 Partnering with the DPLGA would provide the DCI with an operational distribution channel to
 most PNG citizens, allowing rural communities to be targeted via distribution of written material
 at community centres in each ward and district.
- The Department of Education (DoE) A collaboration with the DoE would allow the DCI to engage with youth and students across PNG by communicating targeted messages through teachers, and potentially to reach parents and carers by providing educational establishments with printed materials. The DCI should also work with the DoE to influence the national curriculum and ensure that an appropriate level of digital skills training is included.

² The DCI should work with partner agencies to develop a full methodology for the evaluation survey, including sample size and weighting, questions and other criteria

This mission statement was adopted as part of the ICT sector roadmap provided to the DCI in an Analysys Mason report on 29 March 2018 – *ICT sector roadmap* (ref. no. 2009803-125).

- The National Broadcasting Corporation (NBC) NBC has television and radio channels with a wide reach throughout PNG, as well as extensive television and radio production facilities. A partnership with NBC would allow the DCI to produce television and radio features promoting digital services, and to use NBC's platforms to distribute these messages. We are aware from consultations that there are public-service broadcasting slots available on both the radio and television platforms offered by NBC; the DCI should work with NBC to identify availability of these slots and take advantage where appropriate.
- The Bank of PNG A collaboration with the Bank of PNG may allow the DCI to access executive-level contacts within the financial and banking community, and to co-operate on the development and promotion of relevant and secure digital services customised for PNG. The Bank of PNG is also heavily involved in activities promoting financial inclusion, potentially providing a channel for the DCI to reach remote and digitally excluded communities.

3.6.2 Potential challenges

The strategy outlined in this report represents a step change in the DCI's approach to stakeholder engagement and communications, moving from an ad-hoc approach to a more structured methodology. Given the ambitious change of approach required to implement the strategy, we expect the DCI to face two key challenges during the implementation phase:

- Resources The DCI's Information and Public Affairs division is currently under-resourced and under-staffed. A significant increase in budget is required to hire additional manpower to manage the increased workload and to finance the production and distribution of high-quality targeted communications. If the DCI's capacity remains constrained, the ability of the DCI to successfully implement this strategy will be limited (see Section 3.6.3 for a suggested contingency plan).
- Political support The NEC and key government agencies are both part of the strategy's target audience, but the political support of these agencies will also be a key requirement to ensure the successful implementation of the strategy. Generating top-down support for government ICT policies and programmes is one of the key outcomes of the strategy. Gaining this support will require a significant investment in terms of both time and effort from the DCI. Without high-level political support and a unified government position, the DCI may be unable to address its current resource constraints, which would limit its stakeholder engagement capacity.

3.6.3 Contingency plan

In the event that the DCI continues to face capacity constraints, we have developed a contingency plan which reduces the scope of the strategy and focuses on those segments and activities where a high level of impact can be achieved with relatively small resource allocations. We suggest that the

A capacity-building plan was provided to the DCI in an Analysys Mason deliverable issued on 29 March 2018 – *Capacity Building Plan* (ref. no. 2009803-124).

DCI should focus on implementing the strategy for the three key segments identified in Section 3.2, namely: the NEC, ICT companies and active users of ICT.

These three priority segments are key stakeholders in the ICT sector in PNG, representing the major influencers within the government, business and citizen segments, respectively. Targeting these stakeholders can be expected to have a large impact on the awareness and adoption of best practices in cyber-security and cyber-safety, and also support the case for increased funding and priority for the DCI and the ICT sector in future budget settlements.

3.7 Monitoring and evaluation criteria

We have developed a set of monitoring and evaluation criteria to support the DCI in implementing and measuring the impact of the strategy, shown in Figure 3.10 below. 11 The DCI may wish to change or expand these criteria depending on its final priorities for the strategy. As the strategy is primarily focused on raising awareness, gathering data is likely to require surveys of the target demographics — we would suggest one survey at the start of the strategy and a second survey 12 months later (see ACT2 and ACT24 in Figure 3.9 above). We understand that the DCI may face two challenges when implementing a survey-based approach to monitoring and evaluation:

- the capacity issues faced by the DCI may limit its ability to run a wide-ranging statistical survey 12
- the DCI is in the process of obtaining the legal rights to collect statistical data related to the ICT sector, but is not currently authorised to do so. 13

To address these issues in the short term, we recommend that the DCI partner with suitable agencies – for example the National Statistics Office (NSO) and NICTA – for the purposes of data collection.

The template used to develop these monitoring and evaluation criteria was provided to the DCI in an Analysys Mason deliverable issued on 12 October 2017 – *Policy framework and monitoring and evaluation framework* (ref. no. 2009803-184).

A capacity-building plan was provided to the DCI in an Analysys Mason deliverable issued on 29 March 2018 – *Capacity Building Plan* (ref. no. 2009803-124).

The DCI was provided with an approach to obtaining data collection powers in an Analysys Mason deliverable issued on 29 March 2018 – *Strategic approach to the collection and management of ICT sector statistics* (ref. no. 2009803-133).

Figure 3.10: Suggested monitoring and evaluation criteria [Source: Analysys Mason, 2018]

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<u>Q</u>	Key performance indicator (KPI) or action	Target	Target completion	Implementation agency	Baseline	Data source
KPI1	Milestones within the implementation plan met	100%	12 months after commencement of the strategy	• DCI	0	DCI
KPI2	NEC members reporting awareness of the DCI's activities and programmes, and potential impact of ICT on PNG	100%	12 months after commencement of the strategy	DCI •	TBC¹	Survey of NEC members
KPI3	Number of ICT managers reporting awareness of, and engagement with, the DCI's activities and programmes	100%	12 months after commencement of the strategy	• DCI	7BC	Survey of ICT managers
KPI4	Civil servants reporting awareness of services available on the IGIS and migration plans	%08	12 months after commencement of the strategy	• DCI	7BC	Survey of civil servants
KPI5	Number of technology companies reporting plans to develop or deploy new services in PNG	20% increase	12 months after commencement of the strategy	• DCI, [partner agencies]	7BC	Survey of technology companies
KPI6	Number of large enterprises reporting plans to adopt or develop new digital services	20% increase	12 months after commencement of the strategy	• DCI, <i>[partner agencies]</i>	7BC	Survey of large enterprises
KPI7	Number of SMEs providing digital services and ICT	10% increase	12 months after commencement of the strategy	• DCI, [partner agencies]	TBC	Survey of SMEs in PNG
KPI8	Number of active users of ICT reporting increased awareness of ICT and digital services among friends and family	25% increase	12 months after commencement of the strategy	• DCI, <i>[partner agencies]</i>	7BC	Online surveys on Facebook etc.
KPI9	Citizens reporting awareness of the potential impact of ICT on their lives	25% increase	12 months after commencement of the strategy	• DCI, [partner agencies]	TBC	Survey of PNG citizens
KPI10	Number of newspaper articles or editorials related to ICT and new digital services	1 per week	12 months after commencement of the strategy	 DCI, national newspapers 	TBC	Literature review of national newspapers
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¹ To be confirmed

