

Sustainability Report 2017  
Total Access Communication PLC.



# dtac Sustainability Report 2017



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# THE DIGITAL AGE

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A year of  
progress on  
our digital  
transformation  
journey

dtac's purpose is twofold. Connecting our customers to what matters most. And empowering societies. That vision is reflected in our approach to sustainability and responsible business practices. We believe connected societies are empowered societies. The Internet is the basis upon which we can advance the way we live, work, learn, share and solve global challenges for future generations.

We also recognize that the advent of ubiquitous mobile connectivity has triggered a wave of innovative business models disrupting longstanding industries. Our approach to sustainability is therefore to position dtac to embrace digitalization, to disrupt before we are disrupted, and to empower society so that it may benefit from Thailand's inescapable digital transformation.

People are at the core of this strategy. Whether we are teaching e-commerce skills to a farmer in Loei, or data analytics to an employee at dtac house, in Bangkok, there is a shared goal to make sure Thailand 4.0 is an opportunity, not a threat.

Ultimately, these efforts all rest on the foundation of good governance. And the past year has also seen us grow our efforts to inspect our suppliers and drive our zero-corruption agenda. This three-pronged effort—empowering society, digital transformation, and good governance—is the key to realizing our vision of a more equal and more meaningfully-connected society.



## Empowering Society

Despite Thailand's rapid digitalization, there exists the risk of a widening digital skills gap. While Bangkok has the largest number of active Facebook users in the world, and Thais are the biggest users of Youtube in Southeast Asia, 35 percent of the population remains unconnected to the internet. New disruptive digital services and advances in artificial intelligence could further widen that gap.

On a positive note, the unconnected represent a formidable untapped potential. According to a 2014 report by the World Economic Forum, each additional 10 percent of internet penetration can lead to a 1.2 percent increase in per capita GDP growth in emerging economies. Ten percent of the Thai population remains underneath the poverty line, mostly in the agriculture sector. And only 10 percent of the country's GDP is produced by this same sector, despite it employing 40 percent of the workforce. This reflects low productivity and inequities that can be improved with access to information technology.

In response, dtac has been running the dtac Smart Farmer project by offering a range of innovative agricultural technologies and training programs to reduce operational costs, increase yields and augment distribution channels.

dtac also promotes digital literacy and skills to ensure that Thailand's youth can fully participate in the digital world and reap its benefits, yet remain safe from its dangers. In 2017, we reached out to students in schools, online and through a Stop Bullying chat room, a collaborative project between dtac and the Path 2 Health Foundation.

We also worked hand-in-hand with the Ministry of Digital Economy and Society (MDES) on two key projects to empower Thai society with digital tools. The first, in collaboration with the Ministry of Education(MOE), allowed one million trainees in non-formal education to access a digital literacy curriculum we helped develop. And we have now signed a second memorandum of understanding with the MDE,MOE, the Ministry of Commerce, and the Ministry of Agriculture and Cooperatives to equip rural communities with the skills to launch tens of thousands of online shops.

Beyond safety and skills training, price is another key consideration to spread internet connectivity. dtac offers the lowest rate per gigabyte for data and is committed to keeping our prices affordable despite fast-growing data usage. To achieve this goal, it is also essential the government make available as much spectrum as possible, at prices in line with similar markets, and within a clearly defined roadmap. On our side, we have doubled the speed at which we are building cell towers and have begun switching to virtualized core networks, an essential technology to scale our capacity while keeping costs stable.



## Digital Transformation

The digital skills gap is not just a threat in Thailand's rice fields or in its schools. Organizations big and small are facing the difficult task of undergoing their own digital transformation, too. As disruptive new digital services capture market share, the architecture of every company must be reinvented, its culture reenergized and its employees reskilled.

Facing this challenge head-on, dtac engaged all our employees to experience a new way of working through our Flip It Challenge. It called on them to practice the "agile method," where cross-functional teams rolled out transformative projects in weeks rather than months.

We also vastly improved our digital training capacity. The thousands of courses on offer in the dtac Academy and Telenor Campus allow employees to



chart their own progression and study what they are passionate about. It is not digital content delivered the old fashioned way, but rather gamified, interactive, multimedia and cross-platform.

Our customers and individual retailers, too, can feel the benefits of dtac's digital transformation. The dtac app, dtac one app, and dtac call app allow all our stakeholders to get more done with their phones, and to get it done faster. This results in a much higher use of digital channels, a key metric for our 2020 ambitions.

While offering the best value and the simplest digital experience are at the forefront of digitalizing our core business, we are also looking to a future of radical innovation. In partnership with Telenor, we have developed highly advanced Als that can offer better targeted solutions to our customers. And through our startup incubator, dtac accelerate, we are funding Thailand's digital eco-system's growth and the shining tech stars of tomorrow.

While empowering society is our purpose and digital transformation our strategy, good governance is the foundation on which rests these efforts. It is what drives sustainability in business, society and every stakeholder group. The dtac Code of Conduct, launched in 2003, provides employees with the rules and guidelines to conduct business responsibly and fairly. dtac regularly updates this code as new risks emerge, continuously cultivating a transparent business culture within the organization.

In particular, dtac has pledged to prevent all forms of corruption in its business practice. Our ongoing 'Zero Tolerance to Corruption' program educates employees about dtac's No Gift Policy and our commitment to Fair Competition. In 2017, we also conducted 562 inspections on our suppliers and provided them with 2,586 hours of training on Supply Chain Conduct Principles, Road Safety, and Basic Safety, ensuring fair and safe labor practices are enforced within both dtac and our supply chain.

Our high standards have not gone unnoticed. In 2017, dtac was recognized as one of 110 listed companies with 'Excellence in Good Governance', by the Institute of Directors (IOD), out of 620 listed companies in Thailand. Indeed, dtac believes good corporate governance involves openness, trustful disclosure and engagement between all internal and external stakeholders. As such, and to ensure that dtac's sustainability efforts are conducted in an internationally-recognized framework, dtac upholds the Global Reporting Initiatives (GRI) G4 guidelines. It is in this same spirit of transparency that this report aims to shed more light on our far-reaching efforts to empower society and connect all

**Mr. Boonchai Bencharongkul**  
Chairman of the Board of Directors

**Mr. Lars-Aake Valdemar Norling**  
Chief Executive Officer



# GENERAL INFORMA- TION

## General Information (G4-3,G4-4,G4-6,G4-7)

dtac is one of the largest wireless communication service providers in Thailand. The Company was established in 1989 to provide wireless telecommunication services in 850 MHz and 1800MHz frequency bands in Thailand under a 27-year Build-Transfer-Operate (BTO) concession granted by CAT Telecom Public Company Limited (formerly known as Communications Authority of Thailand).

In December 2012, dtac TriNet Co., Ltd. (formerly known as DTAC Network Co., Ltd.), a wholly-owned subsidiary of dtac, was granted the 15-year spectrum license for International Mobile Telecommunications (IMT) in the frequency band 2.1 GHz and type III license for providing wireless communication services from the NBTC.

At the end of 2017, dtac had 12 subsidiaries, and 2 associated companies (under the definition of the Notification of Office of Securities and Exchange Commission), namely, (1) United Distribution Business Co., Ltd. and (2) Clearing House for Number Portability Co., Ltd. dtac has continued our focus on mobile business and to invest in the subsidiaries with the purpose to mainly support its core business and asset management. Furthermore, dtac is committed to invest in businesses that create long-term value for our shareholders.

## Details of Subsidiaries and Associated Companies as of 31 December 2017

Company's Name	Nature of Business	Registered Capital (THB Million)	Share Types	Percentage of Shareholding (%)	Total Shares of each Company
DTAC Broadband Co., Ltd.	Providing telecommunications services (WiFi services) with Internet license type I	175	Ordinary shares	100	1,750,000
dtac Digital Media Co., Ltd.	Providing telecommunications services and operating the device business	100	Ordinary shares	100 (through dtac TriNet Co., Ltd.)	1,000,000
dtac TriNet Co., Ltd.	Providing telecommunications services	1,160	Ordinary shares	100	11,600,000
dtac Accelerate Co., Ltd.	Investment in and support of start-up companies to develop applications	15	Ordinary shares	100 (through dtac TriNet Co., Ltd.)	150,000
dtac Next Co., Ltd.	Asset administration and management	1	Ordinary shares	99.97 (through dtac TriNet Co., Ltd.)	10,000
dtac Service Co., Ltd.	Asset administration and management	1	Ordinary shares	99.97 (through dtac TriNet Co., Ltd.)	10,000
PaySbuy Co., Ltd.	Providing online payment service, cash card, e-payment and payment services	200	Ordinary shares	100	2,000,000
TAC Property Co., Ltd.	Asset management	1	Ordinary shares	99.99	100,000
Eastern Beach Co., Ltd.	Asset management	80	Ordinary shares	100 (through TAC Property Co., Ltd.)	800,000
United Communication	Under liquidation process	313.55	Ordinary shares	99.81	434,668,207
Industry Public Company Limited	Under liquidation process	450	Ordinary shares	100	4,500,000
WorldPhone Shop Co., Ltd. TeleAssets Co., Ltd.	Lease of telecommunication equipment and devices	1	Ordinary shares	99.97 (through dtac TriNet Co., Ltd.)	10,000
United Distribution Business Co., Ltd. (UD)	Sale of mobile phones, SIM cards, voucher cards and supplementary equipment	200	Ordinary shares	25	20,000,000
Clearing House for Number Portability Co., Ltd.	Operating the Information System and the centralized database for the number portability service	2	Ordinary shares	20 (by dtac and through dtac TriNet Co., Ltd.)	20,000

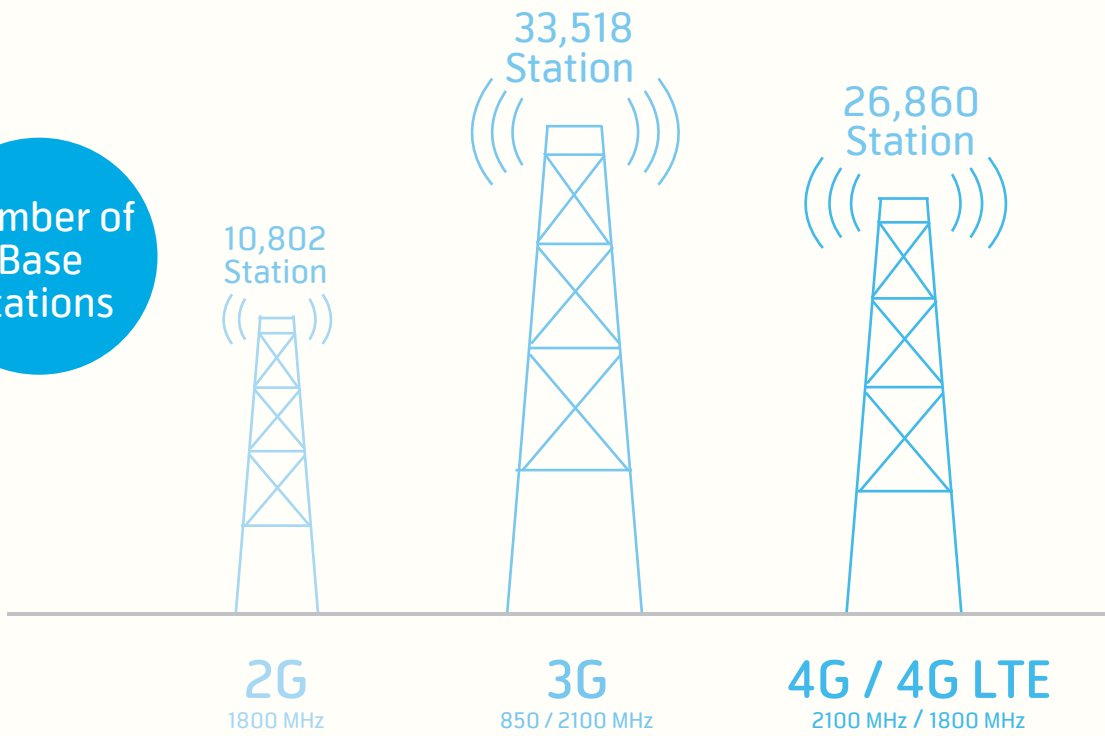


# BUSI- NESS OVER- VIEW

## | Business Performance Overview

In 2017, dtac operated other frequency bands that cover areas throughout the country, covering 77 provinces.

**Number of Base Stations**



With nationwide coverage, dtac is one of the leaders in Thailand's telecommunications industry

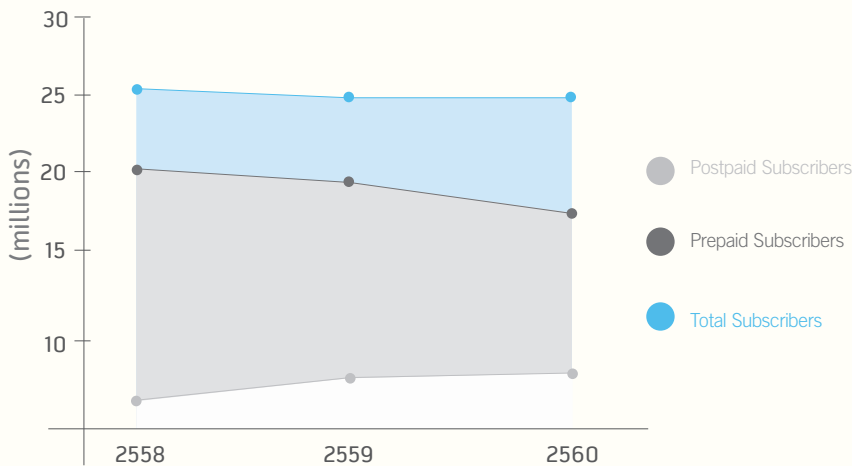
reaching

**22.7** million subscribers

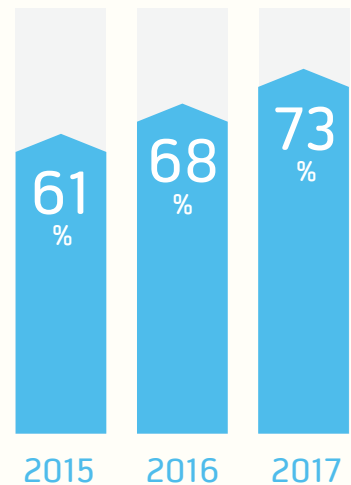
accounting for approximately

**24%** market share

**Number of Subscribers**



**Smartphone Penetration (Smartphone Penetration)**





## dtac's Service Stores

In 2017, dtac operated two types of service stores: dtac hall and dtac center, to best serve the needs of its customers throughout Thailand.

### 1. dtac hall

dtac hall branches nationwide | 52  
customers per shop and per day on average | 350

Large One-Stop Service touchpoint providing a full range of services, providing information about packages and products by service staff and via digital media and touch screens, and with a space to display the newest smartphones, mobile devices and accessories for customers to experience firsthand. In 2017, there were 52 dtac hall branches nationwide, providing services to 350 customers per shop and per day on average.

### 2. dtac center

dtac center : fully operated by dtac  
branches nationwide | 252  
customers per day on average | 150  
dtac center : operated in franchise system  
by dtac's business partners  
branches nationwide | 175  
customers per day on average | 250

Medium-sized one-stop service touchpoint providing key services to both postpaid and prepaid customers. There are two types of dtac centers:

dtac center (COCO): fully operated by dtac with 252 branches nationwide, providing services to 150 customers per day on average.

dtac center (FOFO): operated in franchise system by dtac's business partners with 175 branches nationwide, providing services to 250 customers per day on average.

## Economic Performance

Details	Amount (THB)
<b>Direct Economic Value Generated</b>	
Revenues	78,274,804,473
<b>Direct Economic Value Distributed</b>	
Operating costs	59,528,836,579
Employee wages and benefits	4,570,894,396.62
Payments to providers of capital	1,508,254,373
Payments to government	2,566,191,186
Community investments	48,792,322
<b>Economic value retained</b>	<b>146,497,773,329.62</b>

## Data Revenue

	2015	2016	2017
Data Revenue (in THB billions)	30.7	35.7	43.6
Data Revenue to Service Revenue excluding interconnection charge (%)	46.4 %	55.3 %	67.2 %

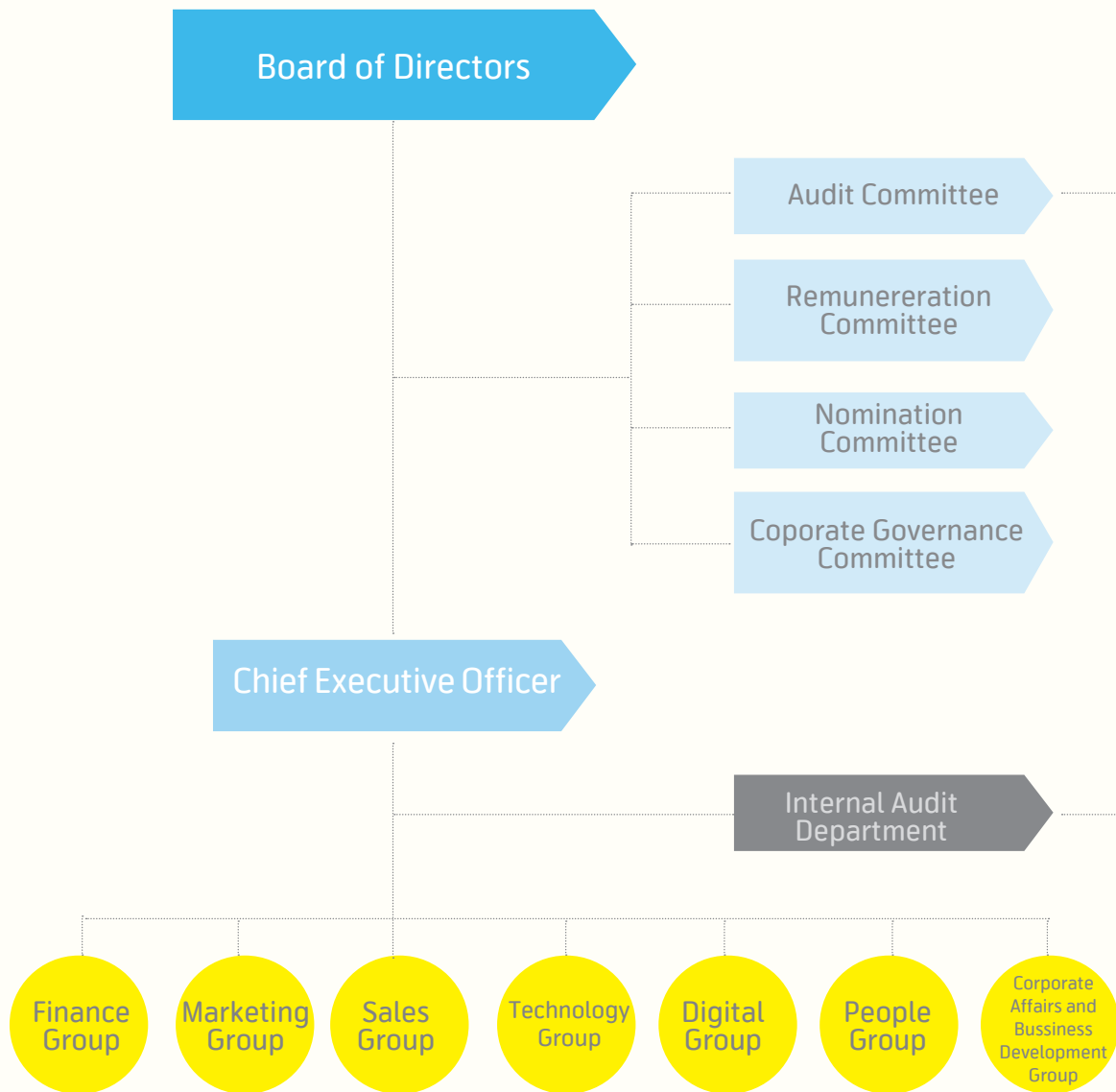
# 2017 dtac Sustainability Strategies

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# Good governance is a foundation of sustainability.

As practiced for many years, dtac strongly takes good governance into account to drive its sustainability initiatives. dtac upholds the Stock Exchange of Thailand's Principle of Good Corporate Governance for Listed Companies 2012. Leading to responsible business practices is dtac's organizational structure which consists of the Board of Directors, the Audit Committee, the Remuneration Committee, the Nomination Committee, the Corporate Governance Committee,

the Nomination Committee, the Corporate Governance Committee, and the management team as well as other executive-level committees which put controls on corporate policies for maximum operational efficiency and integrity <sup>(G4-17)</sup>



Note: 1) In 2018, The Digital Group has been merged into the Marketing Group, effective from 1st February 2018.  
 2) The Sales Group and been restructured to be the Commercial Group. Effective from 1st February 2018.

# EM- POWER SOCIE- TIES

A man in a black shirt and shorts is running through a white, geometric, lattice-like structure. He is carrying a black bag. The structure is composed of interconnected white beams forming a complex, crystalline pattern. The man's shadow is cast onto the floor below him. The overall scene is brightly lit, creating a high-contrast, modern aesthetic.

# Empowering Societies and Reducing Inequalities

In 2017, the vision to ‘Empower Societies’, or utilizing digital technology to strengthen Thai society, was the main focus to shape our sustainability initiatives. It was incorporated with the goal to reduce inequalities in the support of the ‘UN Sustainability Development Goals (SDGs) #10: Reduced Inequalities Within and Among Countries.’ Thus, dtac’s sustainability initiatives and directions are geared towards providing telecommunication and digital skills to minimize income inequality, reduce poverty, and increase equal access to useful digital information that would bring about economic development, better quality of life and a safer environment. This strategy aligns with dtac’s Digital Transformation 2020 goal, which was launched in 2017.

## Staying relevant with government policies

dtac believes digital technology is a powerful tool to reduce inequalities by creating new income generation opportunities and access to a better quality of life. We see the Thailand 4.0 vision as an opportunity for nationwide improvements to the telecommunications infrastructure. We also promote the necessary innovation for economic and social growth. Specifically, dtac provides equal access to information technology and digital skills, ensuring greater access to the benefits of the internet, strengthening occupational skills, increasing incomes and making our everyday life more convenient.

In 2017, dtac signed a memorandum of understanding (MOU) with four government agencies: the Ministry of Digital Economy and Society, the Ministry of Agriculture

and Agricultural Cooperatives, the Ministry of Commerce and the Ministry of Education. The goal of the MOU is to accelerate the government policy to utilize digital technology to strengthen economy and to provide bigger opportunities to generate income at the grassroots level. The process is put into action at Community Digital Centers and Agricultural Learning Centers established nationwide.

In addition, dtac, in partnership with the Telenor Group, announced its commitment to support the Thai government by leveraging its business best practices and social initiatives to contribute to the Thailand 4.0 policy. In 2020, dtac will enhance digital entrepreneurs and startups with capabilities to create 30,000 new jobs through its ‘dtac accelerate’ program. dtac also aims to support 100,000 young Smart Farmers through the Smart Farmer project, which will lead to transforming the agricultural industry with digital technology.



# 2017 Sustainability Performance Highlights

## FLIP IT!

February

start

dtac launched a branding platform 'Flip It' and introduced 'Go No Limit' package that allowed customers to enjoy unlimited data without speed throttles

dtac received the Thailand Sustainability Investment 2016 Award from the Stock Exchange of Thailand, which led dtac stock to be listed in the Thailand Sustainability Investment group.



March

dtac signed an MOU with the Ministry of Digital Economy and Society, the Ministry of Agriculture and Agricultural Cooperatives, the Ministry of Commerce and the Ministry of Education to strengthen the economy and increase income generation opportunities at a grassroots level.

dtac launched 'dtac Precision Farming' to help young Smart Farmers with IOT Smart Farming and turn them into digital entrepreneurs, using IoT technology to improve yields and reduce crop damage from inclement weather by 50%—enough to cover the cost of the IoT solution in a single harvest.

dtac launched the 'dtac Family Care' application to help parents monitor their child's mobile internet use, reaching over 42,000 downloads either as B59/month subscription or as a value-add privilege for dtac members.

## SHIFT HAPPENS! September

dtac organized the Shift Happens talk to promote awareness of anti-corruption and responsible business practices.



August

dtac launched Plik Thai project, allowing anyone to propose ideas to solve problems in their community, with about 300 ideas received.



November

dtac was voted 5th in the 2017 Employer of Choice survey by Jobs DB Thailand Co. Ltd.

dtac received the Thailand Sustainability Investment 2017 Award from the Stock Exchange of Thailand which earned dtac stock a listing in the Thailand Sustainability Investment group.

dtac organized a peer review on 'Partnerships for Reduced Inequalities: How Business Can Contribute to the SDGs,' engaging government agencies, civic organizations, media and influencers in sustainability to develop strategies to reduce inequalities with the dtac Smart Farmer project.



## May

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## June

dtac in partnership with Path2Health Foundation developed and launched a 'Stop Bullying' chatroom pilot program, with over 40,000 visits and 278 chats with P2H counselors.



## July

dtac joined NBTC to launch a SIMs for Minorities campaign and introduced a discounted package for people with disabilities.

## December

dtac accelerate attracted more than THB 150 million in FDI and secured 70% of follow-on funding from investors worth more than THB 3 billion, achieved a whopping 500% growth rate and created more than 10,000 jobs.

2017 Smart Farmer Award celebrated the agriculturists best implementing innovative farming solutions.

The ThinkSmart project collected 60,836 pieces of e-waste, reducing carbon emissions by 765,621.06 kilograms of CO2 equivalent.

The dtac e-Invoice project achieved 1.7 million subscriptions, saving 20.3 million sheets of paper and reducing carbon emissions by 84,000 kilograms of CO2 equivalent.

see you  
next year!

TO BE  
**DARING**

TO THINK  
**DIFFERENT**

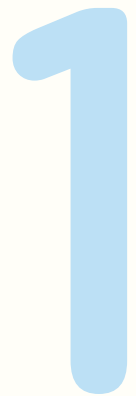
TO  
**ACT FAST**

PASSION  
**TO WIN**



# Digital Transformation for Good

## dtac's Vision, Mission, and Identity



In the digital age, where changes are happening fast and competition is relentlessly intensifying, dtac encourages our employees to be 'disruptors' with these unique characteristics, which we call the dtac DNA:

### 1. 'Be daring'

leave the comfort zone and look for new possibilities to reinvent our products and services.

### 2. 'Think different'

challenge business as usual while coming up with ways to meet customer demands to make their lives easier.

### 3. 'Act fast'

achieve results faster than competitors, and outperform ourselves to maintain our excellence.

### 4. Have a 'passion to win'

an unrelenting determination to fight for victory—and stop at nothing short of it.

We apply these values to the execution of our purpose. As a telecommunications service provider, the value dtac can give is none other than connecting people to what matters most to them – the things and people they love and care about. We achieve this by presenting products and services that are better and more up-to-date, to meet all aspects of our customers' digital lifestyle.

Moreover, dtac, as a telecoms technology specialist, also values offering the technology we have at hand to others, from startups to young farmers, in order to strengthen our society and keep up with the transition to the digital age together.

Ultimately, dtac works hard to make our customers' lives easier, and help them reap the full benefits from communications. Then we conduct an assessment based on why our customers would want to recommend our services to their family and loved ones.

Knowing yourself, understanding your value, followed by implementation and assessment—this is the foundation on which we are building our sustainability initiatives.



EXPLORE

2

Digital  
Transformation in  
the Value  
Chain

# A Sustainable Business is a Business that Adapts to a Changing World

## dtac's Digital Transformation

Thailand is among the top countries for internet usage, both in hours spent online and in active users on leading social media apps. Bangkok is the city with the most Facebook users in the world while Thailand is LINE's second largest market. We are among the top 10 nations in terms of hours viewed on Youtube (daily average per user).

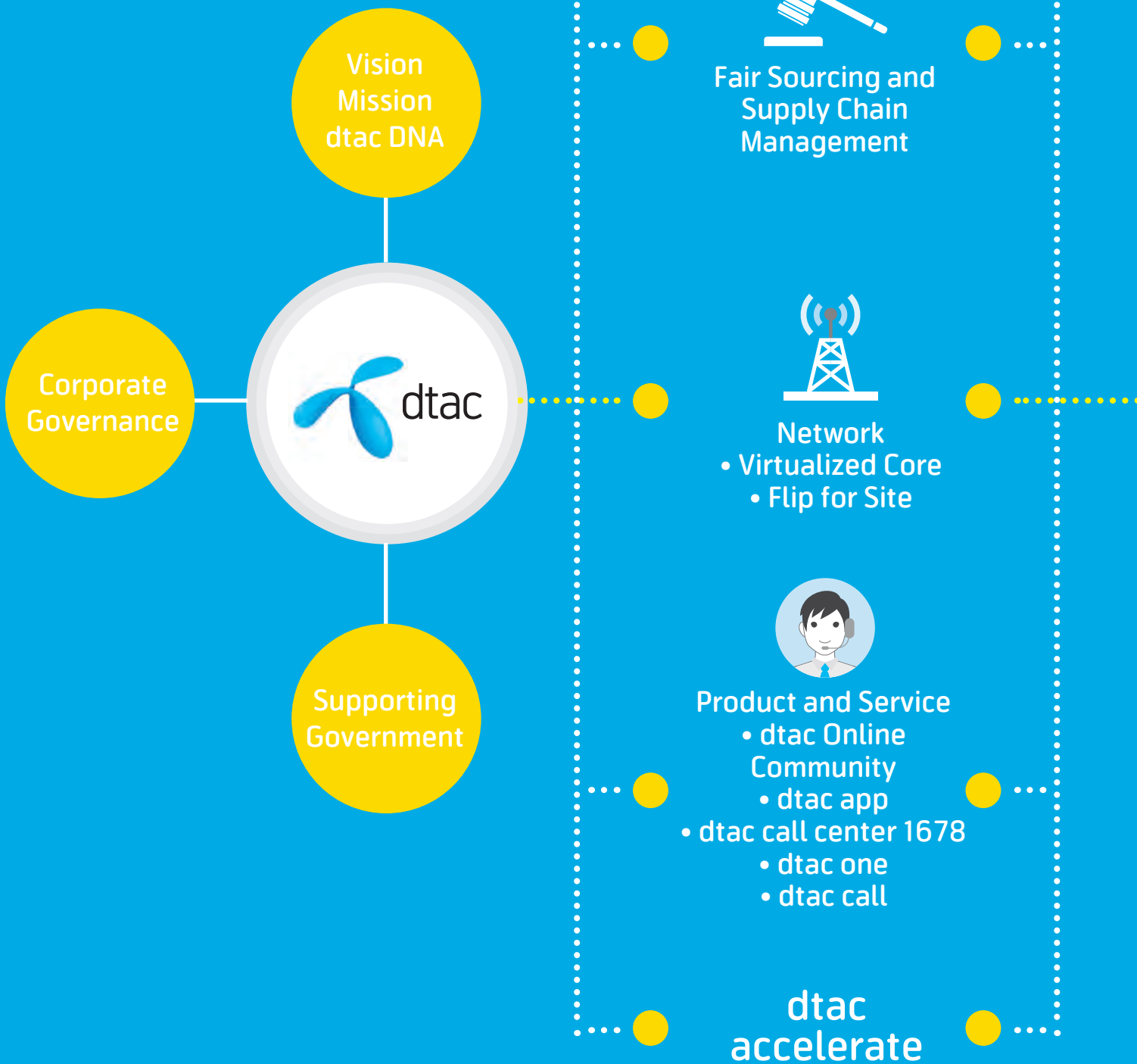
As ninety percent of Thailand's internet users access the web via their phones, their thirst for always-on connections has led to an explosion in data consumption. In turn, as telecommunications companies make the necessary upgrades to their networks, operational costs have gone up. But revenue per user remains flattish. Meanwhile, companies like Youtube and Apple, known as over-the-top service providers (OTTS), are able to attract rapidly growing revenues.

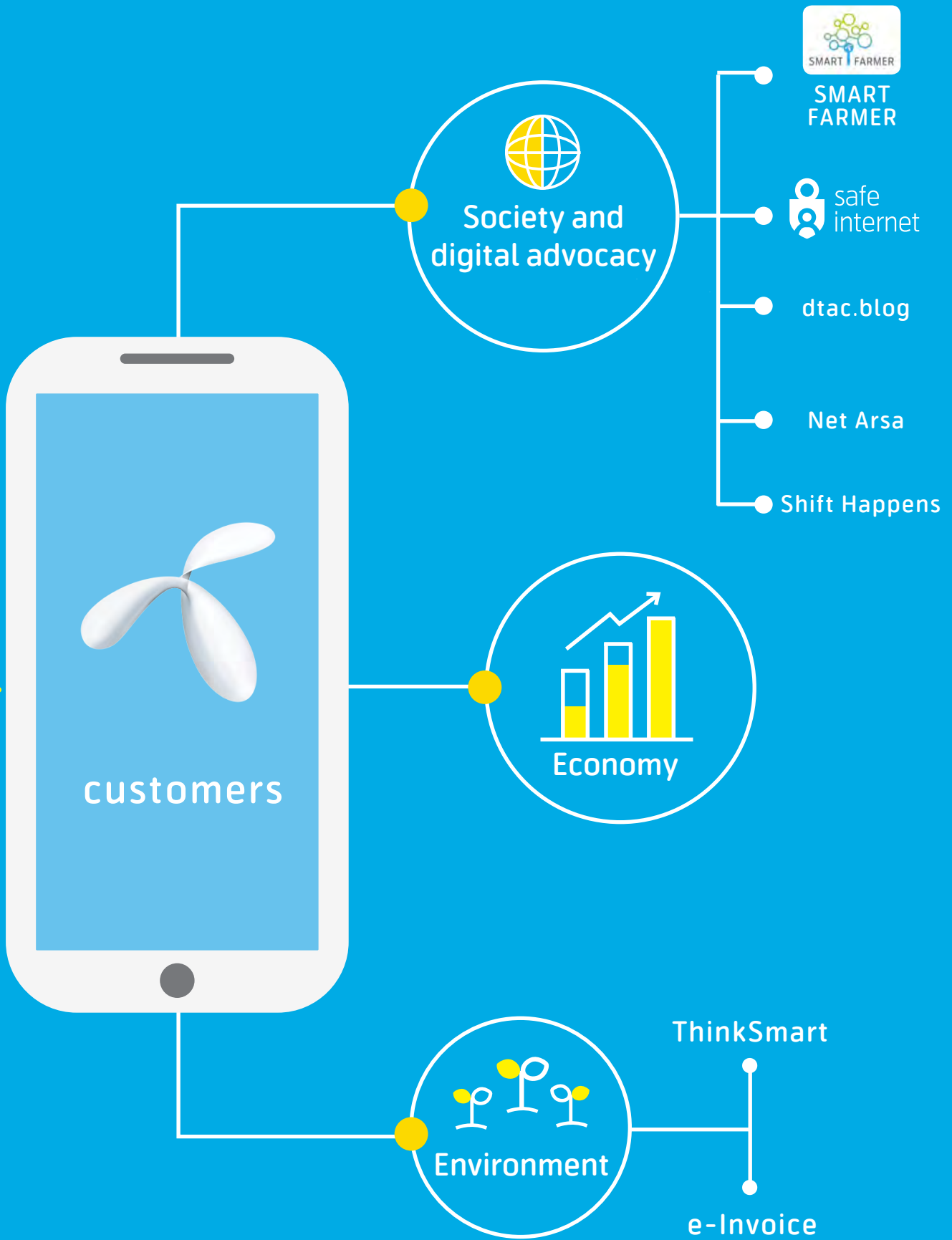
Rapidly increasing costs and slow revenue growth makes for an unsustainable position for telecom operators. And with the rate of change only accelerating, so does the rate at which telcos are being disrupted by digital transformation.

dtac's response to these changes is to proactively embrace digital transformation. While we recognize disruption is inevitable, we also believe that we can be leading the change. To us, disrupting ourselves before we are disrupted is at the core of the organization's sustainability.

In 2017, dtac made significant progress on its digital transformation journey. As we increased the use of our digital channels and launched disruptive new offers, dtac reclaimed its position as a digital leader.

# dtac Value Chain







# 3



DIGITAL  
TRANSFO-  
MATION IN  
PRODUCT &  
SERVICE  
DEVELOPMENT

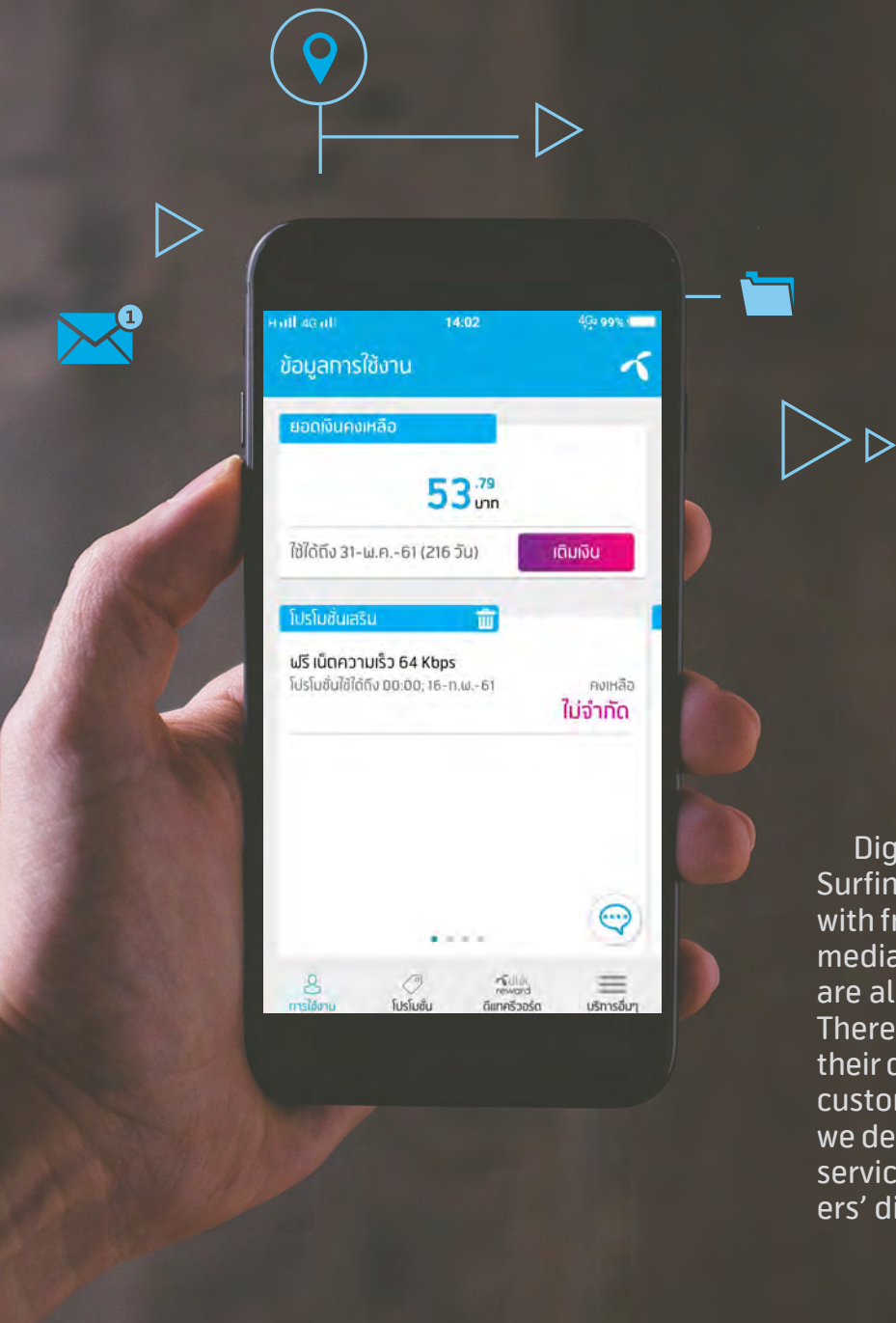
# A New Digital Life Calling for Digital Products and Services

## Digital Transformation in Product and Service Development

In an age where technology and the competitive environment change so rapidly, dtac is not only determined to keep up with the digital world, but also be the telecommunications industry's digital leader, providing the best products and services to meet demands of our customers' digital lives. As long as we are able to provide effective digital offers to our customers, we remain on a sustainable path.

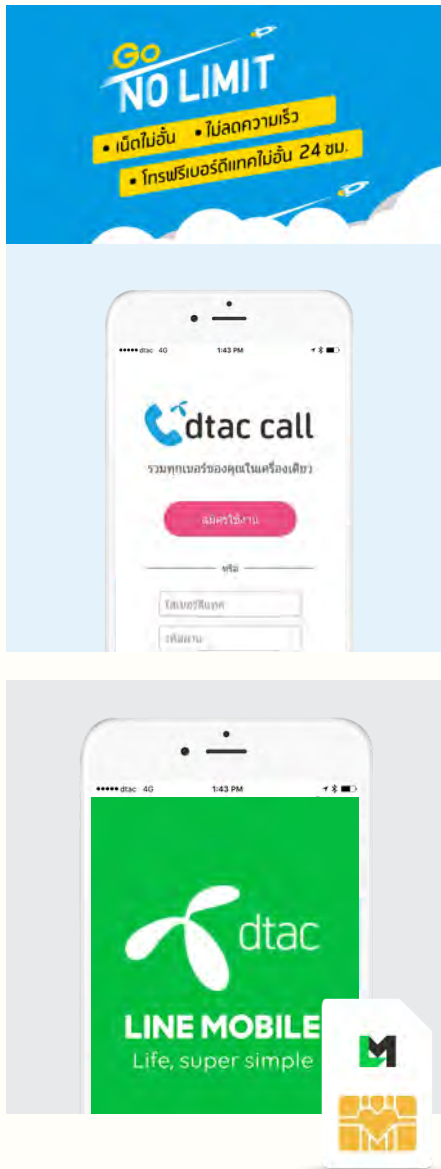
Products and services are like the heart that pumps blood throughout the company in order to keep it alive. This is why creating and developing products and services must rapidly meet the demands of the changing lifestyles, so that we can offer the best to our customers, who are embracing the digital lifestyle just as quickly.

dtac has already started creating new digital solutions for our customers, greatly simplifying their lives and removing pain points from the digital experience. And we will continue to do so even more rapidly from hereon.



Digital technology is everywhere. Surfing the internet, online chatting with friends, posting stories on social media, or running online businesses are all part of our day-to-day living. Therefore, dtac sees areas that lag in their digitalization as pain points that customers want removed. This is why we design and develop products and services that advances our customers' digital lifestyle.

In 2017, dtac launched a new platform, "FLIP IT" to remove pain points both in our customers' lives and our employees'. We called on all dtac employees to find new ways of work that cut down on difficulties and redundancies, so we can serve our customers and their communities better and faster. We systematically studied customers' needs and brainstormed for ideas from our employees at all levels on how to solve these problems. We reached to the conclusion that the main problem had to do with the internet – the heart of the digital lifestyle. To be more precise, customers find it problematic when the internet speed is reduced or stopped. This leads to dtac's designing and launching a breakthrough product and service.



## Go No Limit

Launched in 2017, ‘Go No Limit’ is a disruptive service plan for both prepaid and postpaid customers. It comes with unlimited data at specified speed rates, without speed throttles or data limits.

Go No Limit offers various choices of subscription customized according to users’ lifestyles, including a plan for heavy social media and YouTube usage, or a plan for full HD movies and games, which yields high resolution streaming without lag.

## LINE Mobile

Line Mobile is a new service operated by dtac where users can use the LINE messaging application without it counting against their data plans. This is ideal for the lifestyle of young people who use the Line application as their main channel of communication. Other services also offer utmost convenience for a digital lifestyle. One example is the Line Mobile application, which serves as a service center right at your fingertips, as it allows users to change data plans by themselves, switch between low- and high-speed internet, and live chat with customer service staff – a perfect solution for young people who spend most of their time online.

## ‘Go Plearn’ Prepaid SIM

‘Go Plearn’ is a prepaid SIM card which also offers mobile data without speed drops or extra charges, which are old problems prepaid customers have experienced time and again.

## ‘dtac call’ Mobile Application

What do you do when you have many SIM cards but only one phone? Easy, download the ‘dtac call’ mobile application. The app incorporates many dtac phone numbers in one place. Without the hassle of changing SIM cards, users can make phone calls, send and receive text messages, and use Wi-Fi calling on the app in a single mobile phone. What’s more, these services are offered both domestically and internationally, both on Wi-Fi and on SIMs from other carriers, while users only pay the rate of their chosen plans as they would pay in Thailand, making high costs of international calls a non-issue.

# Find Customers' Problems and Fix Them with Digital Solutions

## Digital Transformation in Customer Service

Providing satisfactory services to customers in the digital age is always main priority of dtac's customer service teams. It requires the customer service practices to adjust along with customers' changing needs and lifestyles. So, the first goal is to find customers' problems faster, then fix them with digital solutions. This saves them both effort and time, and achieves results more effectively. A customer satisfaction survey conducted by dtac in 2017 found that social media and digital platforms, such as the dtac Facebook page, the dtac Online Community and the dtac One application, increased in popularity to 19% (from 6% in 2016) for customers to seek help and support. At the same time, use of the dtac call center (1678) was dropping.

A significant milestone achieved by the Customer Service Department is to incorporate new digital tools into the customer service workflow to assist customers with their problems. Customer service staff then have more time to help customers with more complicated requests or issues. This software can accurately analyze problems reported by customers and react accordingly. For example, if a customer reports a bad internet connection in a certain area, the system can immediately run troubleshooting to locate any malfunctioning hardware and promptly alert the customer in real time, or in no more than two hours if problems are more complicated. Customers will not have to wait for three to seven days for engineering staff to perform an on-site check as was previously standard.

A determination to constantly develop smart solutions to keep up with customers' changing needs and lifestyles has taken dtac's customer service forward on our digital transformation journey. Late 2017, dtac started using a chatbot called "Nong Dee Dee" to answer customers' questions on Facebook, and it has received positive feedback due to "her" cheerful and amicable character and accurate responses. Nong Dee Dee mostly replies to questions about services or promotions.



### Customer Satisfaction Survey Results

Satisfaction level (percentage)

New customer service innovations in the digital era do not just stop at chatbots. dtac is currently developing another troubleshooting system for customers: customers can call in and leave voice messages describing problems they are experiencing without having staff at the receiving end. The software will process the voice messages and promptly solve the problems, relieving call center staff of some workload and helping staff to work more effectively by tackling problems that can be easily addressed right away. Moreover, employees also get an opportunity to get trained in digital skills.

Currently, dtac's customer service covers phone calls, text messages, social media platforms, and applications where customers can manage their accounts by themselves. Services in the digital age accommodate customers better, offer them more platforms, and deliver accurate information in a prompt manner.

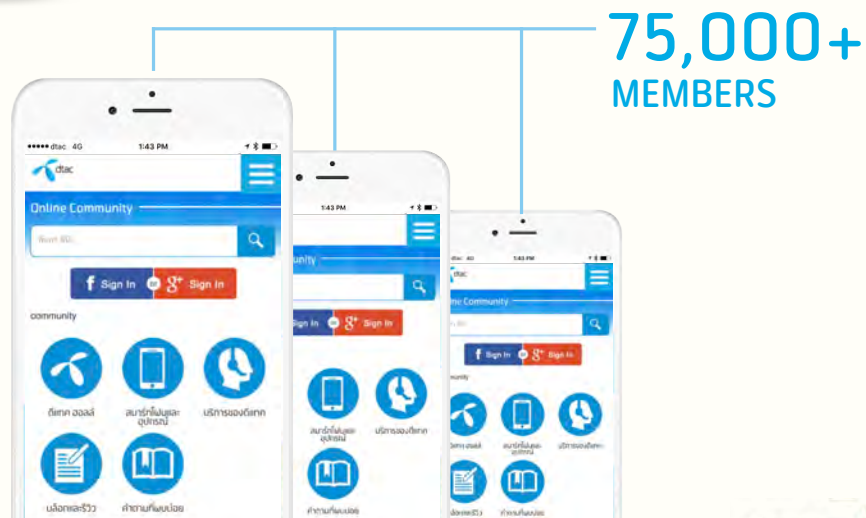
To assess service quality and effectiveness, dtac conducts a Customer Satisfaction Score (CSAT) survey, which reflects customers' satisfaction from service staff on each platform. For customers who give low scores or are dissatisfied, dtac follows up with a Closed Feedback Loop (CFL) process, whereby customers will be contacted and asked to give further feedback. Their comments will play a part in improving the standards of our services to ensure better customer experience in all aspects. In 2017, 25% of customers were followed up with CFL, and these were the findings:



## dtac one

### 'One for All, All for One' Mobile Application for Digital Service

dtac One is a platform born under the “One for All, All for One” concept, which transforms over 4,000 of dtac’s employees into a service hall and call center. Employees can assist any customers right away by just using the application, which comes with many cool functions, including switching mobile carriers, switching from a prepaid to a postpaid plan, and topping up. Every employee can work on their own like a mobile service center and reach out to new customers.



**75,000+**  
MEMBERS

## dtac Online Community

### An online meeting point for dtac users in the digital age

dtac Online Community is a large platform with more than 75,000 members, acting as a center point where customers can meet to exchange information on dtac’s services, smartphones and digital devices, as well as reviews on dtac’s services. They can also discuss problems they are experiencing and no longer have to contact dtac staff.

In 2017, dtac invited some of our “power users” to join our “Super d Hero” program, in which they would assume a role of a helper in the community, solving problems and answering questions about dtac’s products and services on behalf of dtac, as well as sharing dtac’s news and activities. Twenty four such customers have been selected to join the campaign for 4 months. They have provided over 8,000 replies to other community users, worked with dtac to develop FAQ for over 50 issues, and provided more than 100 reviews of dtac products and services, etc.



# 4

## EMPOWERING SOCIETY WITH DIGITAL TECHNOLOGY



# Boosting Thailand 4.0 through Tools and Knowledge

## Empowering Societies with Digital Technology

As a telecommunications leader, dtac combines cutting-edge technology and leading specialists to maximize the benefits of that technology. Moreover, dtac is focused on creating the best products and services for our customers. But customers are not the only stakeholder group that we are working with. When it comes to sustainability, we always asks ourselves: what else can we do to bring the benefits of mobile connectivity to a greater number of people? This question drives the efforts behind our purpose: Empower Societies with Digital Technology

dtac strongly believes that a business company's sustainability does not rest solely on economic growth, but also requires a strong sense of community. We believe that dtac has a part to play in ensuring that Thailand is strong and that its society can keep up with the pace of change in the digital era.



# Growing Thai Startups The dtac accelerate

At present, access to technology is a critical tool to allow new entrepreneurs and tech startups to create a diverse range of services to meet customers' need for online services. Even so, not all fledgling tech companies are able to grow and thrive either due to lack of capital funding, limited access to technology, or lack of experience.

As a large digital technology corporation, dtac fulfills these needs with its financial resources, cutting-edge technological partners, wide customer base and seasoned experts that are brought together into 'dtac accelerate'. The program has been running for five consecutive years, incubating and strengthening 34 startups in various industries: technology and innovation, entertainment, finance, education and healthcare. These startups have attracted more than THB 150 million in Foreign Direct Investment (FDI) and secured 70% of follow-on funding from investors. Collectively, dtac's startups are worth more than THB 3 billion and boast a whopping 500% growth rate. They have also created more than 10,000 jobs.

dtac accelerate is a startup incubator for young entrepreneurs, very much like in Silicon Valley, where the world's first startups were born. The program offers a one-on-one learning opportunity with mentors who are successful entrepreneurs in the Thai startup industry, all in a casual, friendly environment. dtac also provides further support and assistance, namely.

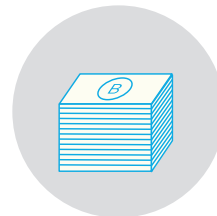
## The Impact of 34 startups



150 million in Foreign Direct Investment



500% growth rate



worth more than THB 3 billion



create more than 10,000 jobs

### dtac accelerate 's benefits

<p><b>1</b></p> <p>An intensive 4-month boot camp by globally renowned experts</p>	<p><b>2</b></p> <p>Seed funding of up to THB 1.5 million</p>	<p><b>3</b></p> <p>Free access to the HANGAR Co-working Space (5 seats/team)</p>	<p><b>4</b></p> <p>Business and legal support from dtac</p>
<p><b>5</b></p> <p>One-on-one mentoring programs with Thai startup entrepreneurs</p>	<p><b>6</b></p> <p>The opportunity to raise funds from the region's leading Venture Capitals (VC) and pitch business plans to corporate partners on Demo Day</p>	<p><b>7</b></p> <p>Commercialization support, such as access to dtac's client base of more than 22 million people and Telenor Group's 178 million customers worldwide</p>	<p><b>8</b></p> <p>Assistance in public relations and marketing campaigns</p>

Moreover, a group of startups which show improvement during the 4-month boot camp will be selected to experience the global startup scene in Silicon Valley and Europe.

dtac accelerate batch 5 was completed in 2017. About 600 applications were received, but only 12 teams were selected to join the program.

## Lifestyle



**COOKLY**

Cookly is a booking platform for cooking classes around the world. Its client base has now expanded to cover more than 60 countries, with more than 250 local and international culinary schools as partners.  
<https://www.cookly.me/>

## Education



**GLOBISH**

Globish is an online English learning platform which provides one-on-one sessions with foreign coaches via video calls, 24 hours a day.  
<https://www.globish.co.th/>



**SENSEINO**

Senseino is an online language-learning platform for Japanese, Chinese and Korean.  
<https://www.senseino.com/>

## Finance



**CREDEN**

Creden is a fintech solution combining eCredit scoring and blockchain technology to facilitate credit approvals and deliver a Know Your Customer (KYC) process in a fast and easy manner.

## Agricultural product and restaurant support



**INDIEDISH**

Indie Dish is a food ordering application which delivers healthy and clean dishes from over 60 restaurants.  
<https://indiedish.co/>




## Social enterprise






**RICULT**

Ricult is a social enterprise which uses satellite imaging technology to improve the quality and quantity of crop yields, as well as provide access to capital for farmers.  
<https://www.ricult.com/>

## Specific services

	<b>DRIVE MATE</b>	Drivemate is a car rental platform offering more than 1,000 choices, of which 60% are rental cars and 40% are privately-owned cars, in over 27 provinces nationwide. <a href="https://www.drivemate.asia/">https://www.drivemate.asia/</a>
	<b>SCOUT OUT</b>	ScoutOut is a job search application which uses big data and machine learning to process and analyze potential candidates. <a href="https://www.scoutout.net/">https://www.scoutout.net/</a>
	<b>SEEKSTER</b>	Seekster is a cleaning and maintenance platform for homes, offices, and condominiums in Bangkok metropolitan area, with over 3,000 maids and technicians. <a href="https://www.seekster.co/">https://www.seekster.co/</a>

## Business support

	<b>SHIFT SPACE</b>	Shiftspace is an online marketplace for offline shops through which brand owners can reach out to target customers. <a href="https://www.shiftspace.co.th/">https://www.shiftspace.co.th/</a>
	<b>TIXGET</b>	Tixget is a platform which enhances ticket sales management for tourist attractions. <a href="https://www.tixget.com/">https://www.tixget.com/</a>
	<b>TOURKRUB</b>	Tourkrub is a platform which puts tour packages from leading tour companies in one place for customers to choose from according to their interests. <a href="https://www.tourkrub.co/">https://www.tourkrub.co/</a>

The 2017 dtac accelerate program was a huge success. The startups have been offered opportunities to experience international startup events: visiting Telenor Digital Winners Asia event in Singapore; opening a booth at the Web Summit 2017, the world's largest tech conference which drew over 60,000 visitors, in Portugal; joining Google Launchpad Accelerator by Google in Singapore; and opening a booth at TechCrunch Disrupt in San Francisco, USA, held by the most influential technology media site – TechCrunch. This has propelled dtac accelerate to become Thailand's No. 1 startup incubator and the 3rd in Southeast Asia. To ensure the program's world-class quality, dtac aims to achieve the following goals within 2020.

Increase its combined startups value to THB 5 billion, or triple of the current value

Become Southeast Asia's No. 1 startup incubating program

สตาร์ทอัพในโครงการจะเข้าถึงลูกค้าในกลุ่มเทเลนอร์กว่า 214 ล้านคน ใน 13 ประเทศทั่วโลก

Create the first Thai Tech Unicorn (a startup worth more than \$1 billion)



dtac accelerate batch 5 (2017) produced superlative startups. We have chosen to feature Seekster and Giztix, two startups that exemplify how the digital economy can solve customer pain points and address social problems.

# SEEKSTER

## dtac accelerate batch 5



Seekster was founded by Sahib Anandsongvit, Daniel Dye, and Chatchanart Charanwattanakit, who saw a gap in the home service industry. Seekster matches customers with service providers, operating under a business model that other cleaning or maintenance companies cannot offer: convenient contact channels, flexible service packages, safety verification, and clear pricing.



Moreover, Seekster has moved on from solving problems for customers to solving problems for service providers as well. Seekster's maids and technicians receive daily wages above the national minimum wage and can manage their time with more flexibility. In 2017, Seekster's 1,998 service providers completed over 48,600 jobs, earning over THB 42,300,000 in total.

Co-founder and CMO, Chatchanart Charanwattanakit told us Seekster's story:

"As a medium, Seekster has to think about both sides. We have to think about how to make our customers' lives more convenient, and also how to bring service providers on our platform a higher quality of life. If they use our platform and their lives aren't better, they'll leave us. So ultimately, we have to help both sides.

"Without technology as a tool to build the platform, it is impossible to manage hundreds or even thousands of jobs in the system. Technology has made it possible for us to manage schedules for our service providers. Maids, for example, won't have to work full-time anymore. A full-time employment in one place means a salary of about THB 9,000 to THB 14,000 per month. At the same time, if they take jobs at Seekster and work about 4 hours a day, that means a daily income of about 600 baht, which in a month means about double the normal monthly salary.

Besides, we also have a support team that is always available for our service providers. As it turns out, they have started asking us for advice on more trivial and personal problems, which our admins are happy to help them with. If you ask what we're meant to be, I'd say we've probably already become a part of their lives, in that we have come to assist them in their work or even advise them on their career path. Many might think that there are no career paths for service jobs, but actually they have opportunities to make more money or advance further, such as to become a head maid. This is in fact a future plan we've started testing with our service providers."

# dtac accelerate



## GIZTIX dtac accelerate batch 3



A freshman in the e-logistics industry, Giztix develops transportation technology for corporate customers, helping them bid on transportation services and better track the delivery status of their goods. Giztix has grown to become a leading e-logistics community that connects customers with service providers online. It also can be patched to corporate's ERP system to bring about automation in logistics.



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Giztix was born out of the hard work of Sittisak Wongsomnuek and his team, who believe in developing Thai logistics to be transparent and reliable at an international standard, all the while enabling small, local enterprises to compete in the digital arena, at a national scale.

Giztix provides a transportation management system for logistics companies to manage their services online. In 2017, Giztix collaborated with 400 logistics companies nationwide, especially small and previously offline ones in Thailand, by building capabilities for them to increase market competitiveness. It has generated THB 70 million in revolving income, 10 times more than in 2016. Moreover, they created a fair play environment where every company, whether large or small, is equally able to compete.

"We really got to learn so much this year," says Sittisake. "I'd like to give credit to everyone in my team, who shares the same goal and never shies away from hard work. Of course, we have connected customers with the right logistics companies, and even earned incomes many times higher than our target, but we don't want to stop here. We want to increase the value of the logistics market where we grew from, and this is a mission for the new generation. We hope to drive Thailand's logistics market to be recognized internationally. In 2017, we developed a strong system; and 2018 will be the year of growth to make our system sustainable. Right now the logistics system we built in Thailand is already stabilized, so next year we will tap more into international markets to achieve our dreams. And we will never forget those who financially supported us."



Bringing Digital  
Technology to  
Those Who  
Need it Most



# dtac Smart Farmer

The dtac Smart Farmer  
Project

Farming and telecommunications may appear as an unlikely alliance, but dtac has been behind the Smart Farmer Project for nearly 10 years now.

The project began in 2008, as dtac recognized that 5.9 million households, or a third of Thailand's entire population, worked in the agricultural sector. Farmers' children, though, were encouraged to work in anything but agriculture, as the stereotypical image of a farmer was tied to debt and burden. We were struck by this paradox. Thailand is among the world's top five exporters from numerous agricultural products, from rice to sugar cane and pineapple.. So how come so many Thai farmers are still so poor?

That question led us to conduct a study where we eventually found that one of the root causes of the problem is lack of access to information. It leads to low yields and a widening economic gap between people in the city and the countryside.

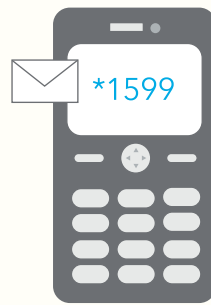
dtac may not have an extensive knowledge about farming, but digital technology is one of the most powerful tools to grow knowledge. When passed on to farmers, it can transform simple crops growers into knowledgeable entrepreneurs. By combining our expertise with that of partners specialized in agriculture, we believe dtac plays a part in reducing social inequality in Thailand.

# dtac Smart Farmer

## 2013

### Farmer Info application

Steve Jobs's invention of the iPhone brought a huge change to the mobile phone industry. dtac also had to adjust by developing an application as an alternative channel for farmers. Farmers who use dtac as their carrier can download the application for free and receive useful information about agriculture from the in-app video clips at no cost for data use



## 2008

### News Alert via SMS and \*1599 Call Center Service

Back in 2008, when mobile phones still had a monochrome display, dtac started by befriending farmers and initiating a news alert service via SMS, with three main topics: rice, field crops, and livestock. Farmers could subscribe to this SMS service for free. dtac also opened a call center line \*1599 to answer questions about farming, with help from the Rakbankerd Foundation.



## 2016

### Online Marketing Course for Young Farmers

In cooperation with the Department of Agriculture Extension, dtac arranged an online marketing course for a new generation of farmers, 18 – 45 years of age, which proved highly successful. As a result, we extended the program and selected potential participants to become our “group of rising stars,” whom we call Young Smart Farmers.



## 2017

### dtac pushed ahead to educate farmers in various topics to improve their working conditions and increase their income

dtac set a target to educate 3,000 farmers in 1) information technology and agriculture and 2) online marketing for agricultural products, including how to set up online shops, taking promotional pictures and videos, developing products and designing packaging, and gaining more likes and followers on social media—but also avoiding the kinds of scams online shops face. In the end, dtac was able to educate 5,000 farmers.



The Smart Farmer Project’s goal in 2017 was to increase digital capabilities of smallholder farmers for them to become 4.0 entrepreneurs. Thanks to Internet of Things (IoT) technology and online marketing courses, we reduced inequality in access to information technology and valuable knowledge, in hopes this would lead to higher incomes.

An assessment of the Smart Farmer in 2017, based on feedback given by 500 participating farmers, found that 58% earned on average 15% more income as a result of online marketing and efforts to sell their products via social media. Many farmers in the program thrived so much on their online shops that it paved the way for them to open booths at large malls on weekends.

The goal of implementing Internet of Things (IoT) technology was also achieved. dtac encouraged our Young Smart Farmers to utilize information technology to make cultivation planning and management more effective.

Precision farming is well established in countries like Israel, the United States, Japan or Taiwan. But most Thai farmers still do not have an access to it because the imported technology is costly. This is why dtac and the National Electronics and Computer Technology Center (NECTEC) worked closely on developing IoT-based solutions that are affordable for smallholder farmers. In 2017, the resulting precision farming solution was implemented in 30 pilot farms in the Smart Farmer project. As a result, farmers could harvest more crops and could recoup the initial cost back after only one harvest. See an example below.



# Crop yields comparison

Data from a tomato farm in Chachoengsao province with greenhouse temperature control by using fog spray to bring down temperatures during the summertime

A controlled environment yielded

**210** kg.

This can reduce risks of bad crops due to weather woes by

**50%**

which translated to

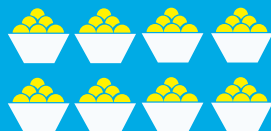
**31,500** more income

(based on a rate of THB 150 per kg). This means the period for a tomato farm to cover the cost of the tools used is one harvest season.



Winter (September - February 2017)

800 kg of crop yields



an average of 2 kg per plant



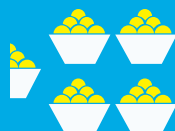
= 2kg.



Summer (March - September 2017)

without greenhouse temperature control

450 kg of crop yields



an average of 1.12 kg per plant



= 1.12kg.

with greenhouse temperature control

660 kg of crop yields



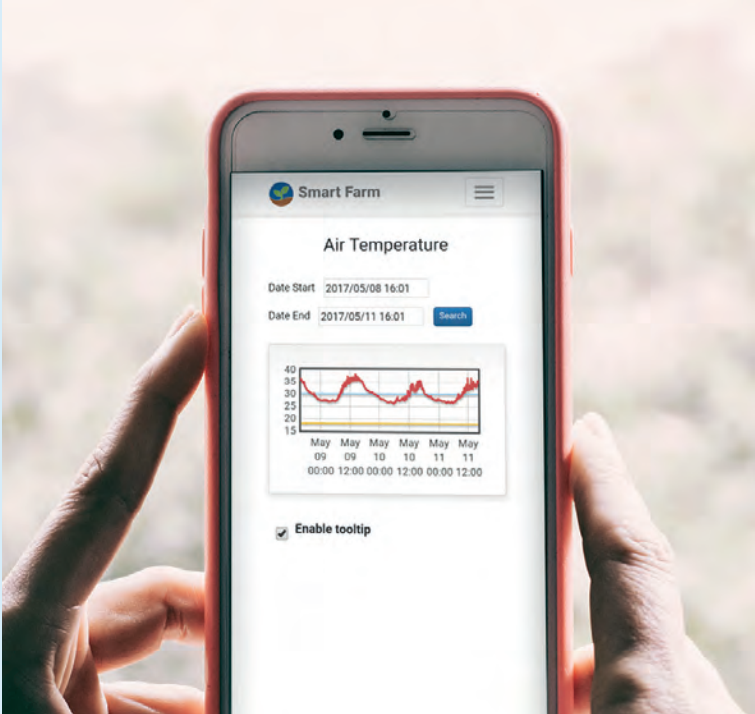
an average of 1.65 kg per plant



= 1.65kg.



= 100 nn.



This Precision Farming set consists of sensor boxes scattered around the greenhouse, which measure soil moisture, air humidity, temperature and lighting. It processes the data before sending it to farmers' smartphones or tablets in real time. Farmers can monitor their farms and attend to them more promptly in cases of unpredictable environment changes. To illustrate, if we set a greenhouse's maximum temperature at 35 degrees Celsius, and the sensor detects that the temperature has started to rise, it will send an alert to farmers, allowing farmers to respond by turning on sprinklers or opening an air tunnel. Consequently, farmers are able to control the quality of their crops and calculate their yields more accurately.

All of this works together via internet signals from dtac SIM cards. All data, besides being sent to the application on farmers' mobile phones, will also be sent to dtac's database where data from other farms are also consolidated. In the future, dtac aims to build a big data solution of suitable environments to grow each kind of plant while achieving the the highest yields, which dtac will share with all smallholder farmers.

dtac also has many future plans for the Smart Farmer project, such as developing the Precision Farming system to operate more automatically. For example, when the app notifies a farmer that soil humidity in his greenhouse has gone down, the farmer could control the water valves via the app.

After 10 consecutive years of the project's execution, dtac has found that our pride lies not in our ability to develop the technology, but in the public good we have been able to do with the technology we have in our hands; the social inequalities in the access to information technology, data, and knowledge we have been able to reduce; and the increase in income we have brought about for farmers.

Moreover, we have seen a change in the attitudes of farmers towards information technology – they are now more open and savvy in handpicking useful data to improve their own profession, their income, and their quality of life.

# 78%

of the farmers agree that technology helps farmers gain more knowledge and skills for their profession

# 76%

agreed that technology is a source of knowledge which allows farmers to access information more easily

# 71%

agreed that technology helps improve their quality of life

# dtac Smart Farmer

Melon farming requires accuracy. After using dtac's Precision Farming, our work remains delicate but becomes more precise

## Nut Munkong

owner of CoCo Melon Farm in Suphan Buri province



“Melon farming requires accuracy. After using dtac's Precision Farming, our work remains delicate but becomes more precise. We don't need to guess the soil moisture by putting our hands in the soil anymore. When one day we become a farm with many greenhouses and we cannot check on every one of them, these tools will be even more critical, reporting on each greenhouse's precision at all times. I can then delegate work to my farm workers more easily and have more free time to grow other sources of income, such as making soaps from melon skin, and going further to turn my farm into a tourist destination with a restaurant and a souvenir shop.

“Another thing dtac deems important for young farmers is online marketing. It doesn't matter how good our crops are or how much we can grow, if at the end we cannot sell anything. Since I joined the Smart Farmer project, attended the online marketing course, and had my farm become a Precision Farming pilot farm, I have learned so much. I wanted to spread that knowledge and create networks, so I assembled a group of melon farmers, because if we can gather all our products, we can negotiate prices with our buyers all year round, which means a more stable income.

“The quality of life is better for me, my family, and also my farm workers. On top of the usual wage, we've been giving out bonuses recently. If a farm worker scores 60% in their evaluation, they might get a 60% bonus. But if they score 80 to 90%, they'll get an even higher bonus. Everyone is happy.

“In the past, when you were asked what you'd like to do for a living, it was cool to say a doctor or an engineer. But now, when I'm asked that question and I say 'farmer,' I feel like it's cool and I'm proud. I think we farmers can have sophisticated management skills, too.”



# dtac Smart Farmer

## Joy | Vorawan Thamrongvarangkul Buay | Sarunthorn Tweittipong

owners of Thamrong Farm, an organic farm in Nakhon Nayok province

“At first we didn’t know anything about farming, and never thought about becoming farmers. But we got tired of our desk jobs, stuck in front of a computer, and thought it was time we started our own business. After we joined dtac’s Smart Farmer initiative, it changed the way we farmed, with basic tips like watering plants in the morning. This support kept us going but didn’t generate that much income.

“After we joined the Precision Farming project and became one of the 30 pilot farms, dtac stepped in to support us with the tools to measure soil moisture, temperature, air humidity, and sunlight. We got to know more about plants thanks to the numbers showing up in the app. Our yields also improved, from 5–8 kilograms to 8–10 kilograms – same greenhouse, but higher income.

“Normally, organic farming relies on the soil, and we cannot see below the surface of the earth how the soil underneath is, we can only see the top soil. Sometimes we see it as dry, but actually it is humid underneath. This is something we cannot possibly know without the tools, which have also helped us save water if compared to previously. We now only need to water until we hit the right moisture level, we don’t need to water more for the next day. The initial cost might be high, but in the long run it is sure to pay off and sustain itself. The Precision Farming system can last for decades, if you regularly update the firmware and use it right. And we, the new generation, have easy access to the internet when we need support on how to use it. So it is a perfect solution and helps a lot.”

Our yields also improved, from 5-8 kilograms to 8-10 kilograms – same greenhouse, but higher income





# Smart Farmer Awards

Another activity dtac takes great pride in is the Smart Farmer Awards for visionary agriculturists. The award program is in partnership with the Department of Agricultural Extension under the Ministry of Agriculture and the Ruam Duay Chuay Kan Sam Nuek Rak Ban Kerd Foundation. The award entered its ninth consecutive year in 2017.

From the award program assessment, dtac found that candidates showed constant improvements each year, especially on the end-to-end harvest planning and use of research studies and technology in conjunction with local traditional knowledge to drive business, control production, marketing and sales, unlike traditional agriculture in the past that may not fit with the modern agricultural market.



In 2017, dtac held a Smart Farmer Award under the innovation-driven concept of “Well-Rounded Farmers,” who must have these two main qualifications

## 1. Management skills in land resources, labor, capital, cultivation

and product processing to meet customers’ demands, on the basis of using knowledge, creativity, and application of local knowledge together with modern innovation, to elevate agricultural products to a higher quality

## 2. Professional skills, including using technology to gain access to news and information

for efficient agricultural management, transitioning from traditional to modern agriculture, business planning, using technology and innovation to drive pre-production marketing, and willingness to share lessons and experiences with the public

### The committee awarded the prize to



#### The 1st prize Award Ms. Jirawan Khamsaw

a Chiang Mai farmer who grows Cordyceps Militaris mushroom on organic fertilizers, for her strength on innovative end-to-end approach to developing organic products while meeting the growing demands of today’s customers. She uses her PhD knowledge to further develop organic fertilizers to replace chemical fertilizers, create her own brand, as well as use the QR code technology to allow customers to perform product traceability. Moreover, she teams up with a local community enterprise to distribute income locally.



#### The 1st runner-up award Mr. Pichet Kantawong

a farmer from Chiang Rai who grows melons, figs, strawberries, raspberries, morning glory, and cherry tomatoes under a brand called Ozone Farm. He adheres to organic farming without chemicals – a new alternative for better consumer health – under quality control according to the Ministry of Agriculture and Cooperatives’ Good Agricultural Practices (GAP). In addition, he builds his brand through online marketing. His Facebook page boasts more than 42,000 followers.



#### The 2nd runner-up prize Ms. Siriporn Thiangsantia

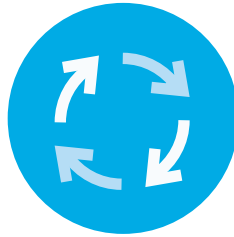
a digital-era “riceberry” (a dark, almost purple variety of rice) farmer from Rai Phuang Sap in Suphan Buri who wants to change farming from the traditional style that heavily uses chemicals to eliminate pests to non-toxic practices instead. She argues that eating chemically-grown rice is no different from eating toxic rice, as it is detrimental to the body. She mixes new innovations with local Thai knowledge – combining natural rice drying techniques with milling technology and vacuum packaging, allowing for longer storage.

From more than 300 applicants in 2017, dtac found that there were three important trends in modern Thai farming



### 1. DATA-DRIVEN FARMING

Farmers apply information technology in operation planning to assess various farming factors and predict the market's demands in each production season, through a systematic procedure of research and statistics, coupled with analysis of open data from other sources, resulting in precision farming: reduced costs, increased quality of yields, and better suitability to the market's demands.



### 2. RENEWABLE ENERGY

Farmers invent tools allowing energy to be used continuously in their farming areas, resulting in more efficient production and reduced costs from saving energy usage in other steps.



### 3. BIO-PESTICIDES

This method, which is gaining popularity, combines local knowledge with research by farmers, resulting in safe yields and reduced costs from chemicals, for example an invention of organic fertilizers made from Mycorrhizal and Rhizobium fungi to promote growth and prevent possible diseases in plants.



dtac found that the three trends share an important common ground: using innovation and data technology as a basis for farming, from planning to market analysis, cultivation, disease prevention in plants, and product delivery to the hands of customers. This is considered a turning point for Thai farming, which will allow Thai farmers to improve their quality of life and their community.



safe  
internet

The Safe Internet Project

Teaching New  
Generations to Use  
Technology Safely  
and Creatively







# 28%

of Thai children think  
cyberbullying is normal

# 39%

find it fun

# 59%

report to have cyberbullied  
others before

When we talk about technology, the online world, and digital media, we tend to forget that besides adults, children make up a large group of users and need even more attention from us.

The Electronic Transactions Development Agency (ETDA) found that 75% of Thai internet users are youth, who spend an average of eight hours on the Internet per day.

According to the same survey, more than 80% of children using the internet reported to have been harassed, deceived, and bullied online. However, most children don't have the right people advising them, and most learned to navigate the online world by themselves, through friends or from their siblings. Only 7% learned from their parents.

What's more worrying is that, according to a survey by Mahidol University's National Institute for Child and Family Development, 28% of Thai children think cyberbullying is normal, 39% find it fun, and more than 59% report to have cyberbullied others before.

As an Internet service provider, dtac saw these threats as very alarming and initiated activities and created products which would help children use the Internet in the safer ways, provide them with learning channels, and add security measures for children. In 2017, we set these four goals

1. Raise awareness about problems affecting children on the Internet, particularly cyberbullying prevention
2. Add regulation measures into products and services
3. Build cooperation for a better Internet ecosystem
4. Co-create good policies and regulations



# STOP BULLY-ING

## The Stop Bullying Chatroom

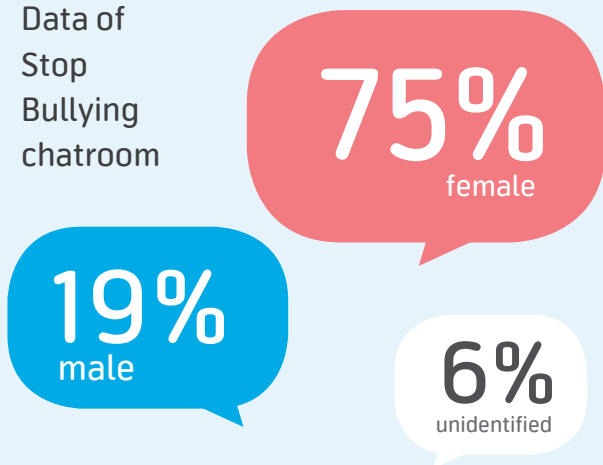
As previously mentioned, cyberbullying is rampant among children in the online world. dtac, with the United Nations Children’s Fund (UNICEF) and the Path2Health Foundation (P2H), started the Stop Bullying campaign by developing an online chatroom (<http://stopbullying.lovecaresation.com>) where youths who are victims of bullying – both online and offline – can seek help and counseling, so that they will learn how to manage such problems with the support of P2H experts who understand them.

Although 2017 was only a trial period, the Stop Bullying Chatroom was used by 212 children coming in for advice, and 13,109 website visitors. There were 278 counseling sessions in the chatroom. This is a good sign for a full launch expected in 2018.

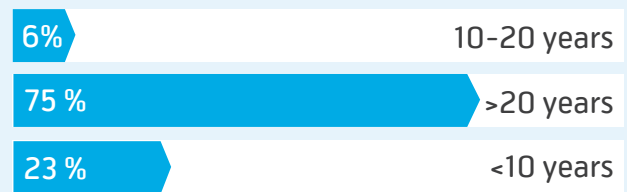
[www.stopbullying.lovecaresation.com](http://www.stopbullying.lovecaresation.com)



### Data of Stop Bullying chatroom



### Age statistic of the visitors



### Topics which children sought advice on included

- verbal bullying
- physical bullying
- relationship

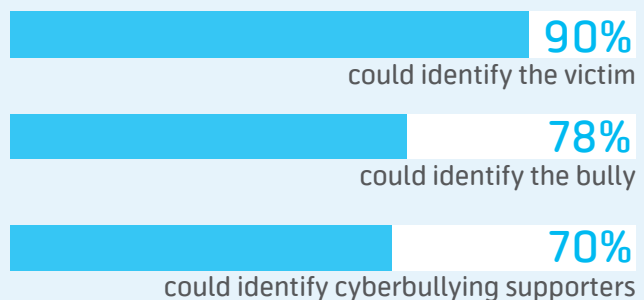


## dtac Digikidz Schools Visit

Cyberbullying is becoming an ever-more serious problem. To shield children from it, dtac traveled to 48 schools to hold workshops educating children on how to handle cyberbullying, with over 27,000 students participating.

In the workshops, children learned 1) about different types of cyberbullying to reflect on whether or not they were being a bully or a victim, and 2) how to handle the situation if they were victims. Or if they were bullies, they would know to immediately change their behavior.

After the workshops

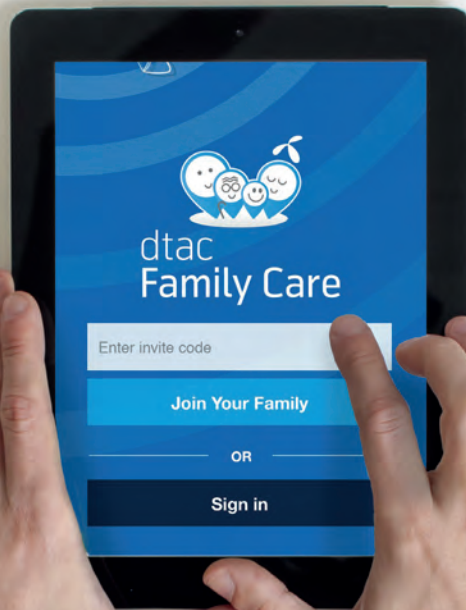


80%

of the students became more aware and understood more about the negative impacts of cyberbullying

90%

of the students became aware and understood that inappropriate video clips or images which could lead to cyberbullying should not be shared



# dtac Family Care Application

To achieve the second goal of the project, the dtac Family Care application was developed by dtac in collaboration with Smith Micro Software Inc (SMCI), an American software developer which wants to increase mobile and Internet security for children. The target group is children between 6 to 15 years old, which is an age range of first-time smartphone owners but still receptive to some parental control. In 2017, there were over 42,000 downloads, either as 8.59/month subscription or as value-added privilege for dtac members.

It's an easy-to-use app, and you don't need to be that tech-savvy to use it. Parents need to simply install the app on both their own and their child's smartphones, and start monitoring children's smartphone usage with these 6 main features



## Application regulation

Parents can ban some applications and limit the time a child can spend on each app.



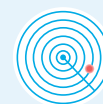
## Incoming and outgoing calls regulation

Parents can determine who the child can call or receive calls from and limit the time spent on the line



## Safe space

Parents will be notified via the app immediately when the child ventures into unsafe locations which have been previously set



## Lost phone tracking

In a case of loss, the app can make the phone ring to locate it



## SOS

In a case of emergency, the child can tap the SOS button to immediately call every family member for help



## Real-time location

Parents can always know the child's location



# Net Arsa

Reducing Inequalities and Developing Rural Communities with Digital Knowledge

Dtac Net Arsa



dtac is highly aware of the digital divide in Thai society and believes that good infrastructure with good coverage can only benefit society if people in communities with low rates of digitalization are educated on how to reap the benefits of connectivity. Therefore, we initiated the dtac Net Arsa project in 2014, traveling all over Thailand to give Thai people a basic Internet education in order to help them take advantage of the digital world more effectively.

The dtac Net Arsa team performs on-site visits to educate people in each community right in the comfort of their own homes. But after years of experience, we found that such visits could only train a few thousand people a year. Therefore, in 2017 dtac tried to figure out how to change the way we worked in order to create a wider ripple effect. The “Digital Teachers” project with the Education Ministry and the Digital Economy Ministry allows the, the dtac Net Arsa team, to focus on educating those who are especially keen, in order to turn them into digital teachers who can pass on their knowledge to other people in their communities.

With a new work method, dtac aims to create one million digital teachers within three years, whereby one teacher must spread knowledge to at least five community members, which means we will have a lot more people equipped with digital knowledge. The teachers will use a student-centric approach: teaching people what they want to know, focusing on things that are useful to people of all ages, as well as flexible learning design to fit people of different professions, such as farmers, fishermen, artisans, etc.

The Net Arsa team’s goal for next year is to drive more community enterprises online by encouraging locals with digital knowledge to utilize it and build new online community enterprises. We strongly believe that this will help bridge the social divide



# dtac.blog

## Sharing about the Benefits of Digital Transformation to the Public

dtac.blog

As our society shifts from analog to digital, telecoms service providers like dtac must not only keep up in terms of products and services, but also ensure all our stakeholders can benefit from a more connected future.

For this reason, we launched dtac.blog, a new platform to share the challenges that come with digitalization, from upskilling employees to changing our work culture. These challenges are faced by every actor in our industry, but also those in banking, transportation, tourism and retail, as new digital services bring both progress and disruptions.

1

### All-in-one solution the right channel for online users

As media consumption shifts from print and television to online, a blog offers more visibility, can be conveniently shared with friends, and offers an open space for discussion. It also emphasizes a more open and transparent way of communicating, in line with dtac's own values and the cross-functional, collaborative nature of digital projects.

2

### Killing two birds with one stone simultaneous communications with all stakeholders

dtac wants to tell the story of our digital transformation not only to external stakeholders such as media, investors and customers, but also to our employees, who are key to driving dtac's change. The blog is a medium that can communicate with both insiders and outsiders, accelerating the rate at which we can deliver news and underscoring that we are open and transparent about our progress.

3

### Putting the reader first a content first approach

Rather than put out press releases focused on dtac's launches and achievements, the blog format invites readers to see the processes behind our transformation. From strengthening consumers' personal data privacy and skills building in the digital age, readers get to meet the digital talents moving dtac forward. The blog focuses on sharing content that can be valuable to every reader, rather than simply trumpeting our successes.

4

### The Analytics Age data-driven development cycles

One advantage of online platforms is the availability of detailed and actionable analytics such as numbers of readers, length of time spent reading, shares and mention counts. This allows us to do more of what works and less of what doesn't, in line with a more iterative, agile way of working.

# 6

# RESPONSIBLE BUSINESS PRACTICES



# Do the Right Thing

## Responsible Business Practices

This report covers various factors that make dtac a company that operates sustainably. Integrity is perhaps the most important factor that can lead to strong and sustained growth for the company. Here, we have detailed how dtac approaches “doing the right thing.” While we are not claiming to be perfect, we take pride in the strict standards we hold ourselves to.





“If consumers push for fair competition, zero corruption and good governance, they’ll actually get even better products, they’ll pay less for them, and they’ll live in a fairer society, too. Good to the consumer and good to society are really the same thing.”



**LARS NORLING,**  
CEO, dtac

# Zero Tolerance for All Types of Corruption

## Running a Business with Integrity

dtac takes business ethics very seriously. We have established the Ethics and Compliance Department to execute the 'dtac Code of Conduct' and ensure that all dtac employees comply with its guidelines and regulations under all circumstances. The Code of Conduct covers all key topics including human rights, workforce, healthcare, sanitation, security, environment, conflict of interest, internal data usage, corruption, internal control, and disclosure of information.

Among the aforementioned subjects, Zero Tolerance to Corruption is one of dtac's top priorities not only because of our legal obligations and the company's ethical stance, but also because corruption is a serious threat to business operations as it could destroy the company's reputation and put the business at risk. It is the polar opposite of sustainability.

As a result, dtac has launched a dtac Anti-Corruption Handbook and given it to all dtac employees to educate them on the high standards of our Anti-Corruption Policy, which involves prohibition of gifts, hospitality activities, complimentary events, facilitation payment, etc.

All employees are also required to attend training sessions and take a test to evaluate their understanding of these issues.

At the beginning of its implementation, the Code of Conduct was not always readily embraced. Employees were concerned that refusing small gifts from customers who had been satisfied with their service could be perceived as contrary to local customs. By producing training that included multimedia elements such as animation and comic strips, employees were able to grow their understanding of the logic behind dtac's No Gift Policy, how to execute it within the local context and learn to embrace it.

There are, for example, circumstances where an employee simply cannot refuse to take a gift, such as gifts being given on stage to thank a keynote speaker, or those sent by post. The employee is then required to register those gifts with the Ethics and Compliance Department, and the gifts will then be donated to those in need.

Another challenge dtac faced once we implemented our Code of Conduct was how the Ethics and Compliance Department would balance its role as regulators, educators, complaint centre, and advisor to employees requesting advice on the implementation of the Code of Conduct.

In response, dtac create a safe place for communications and conversations. The Ethics and Compliance Department, which is a neutral entity, must not be influenced by any employee (even one at the executive level). All employees are encouraged to share ideas or submit complaints to the department at all time either via an email or in person.

As a safe territory for the employees, the Ethics and Compliance Department is not perceived as strict police officers but rather as allies who can give them guidance and support.

Number of the executives and employees attending the training on the zero tolerance to corruption policy<sup>G4-S04</sup>

Employee Level	Number of participants (Person)	Percentage
Operational	3,918	83.25%
Executive	49	92.45%

	Content Description	
<b>Ethical Leadership Program (ELP)</b>	Assigning employees at the supervisor level to attend training sessions held by Thai Institute of Directors (TID) about conducting managerial work according to the company's ethics and Code of Conduct.	102
<b>Code of Conduct and Anti-Corruption</b>	Training on the Code of Conduct and related policies regarding event participation and organization for the Business Operations and Postpaid teams.	33
<b>Business partner, "We are friend"</b>	Fostering a friendly environment for employees to guide their colleagues on work practices in compliance with the Company's Code of Conduct and policies, particularly about reimbursement claims, event participation and organization, project approval, etc.	7
<b>Reimbursement Claim Training</b>	Providing training on how to claim reimbursement by following the company's policy on the subject to prevent possible mistakes.	108

# Leading the Industry's Good Governance

## Fair Business Competition

The government's Thailand 4.0 policy has underscored how the telecommunication industry plays a very important role in the country's development. Our ability to provide mobile internet access to all, at a price they can afford, is key to Thailand's digitalization. Therefore, it is necessary to lead our industry and business in a sustainable way in order for every player in the sector to thrive sustainably. Better services and more affordable prices are benefits that can be shared by all Thai citizens.

dtac has been working closely with numerous partners to build a roadmap for the industry's sustainable development, from the NBTC to international consultants specialized in best practices in the telecommunications industry. We are committed to strictly complying with Thai law and regulations, offering our expertise where it can best serve the nation, as well as attending public hearings or any such activity which will help elevate the standards of the telecommunications business. The key principle is to put the customer and society as a top priority, not just profits from business. We believe that customers benefit the most from fair and transparent competition, and that it is what allows sustainable growth for the telecommunications industry.

In 2017, dtac proposed a report to the NBTC as a roadmap for Thailand's telecommunications to be at their most efficient and beneficial for consumers. The paper was the result of research conducted by NERA (a leading global consultant company specializing in analysis and planning of spectrum auctions in Asia-Pacific, Europe, America and Africa). It covered the existing licenses in the 900 MHz and 1800 MHz bands that will end in 2018. According to NERA's research, the so-called "N-1 rule" will not allow for the greatest possible amount of spectrum

to be released and will lead to exorbitant prices that are not in line with similar markets. The auction prices in the 2015 bidding suggest this method eventually yields less profit for the state because much spectrum remains unsold. In time, issues such as these reduce the motivation and available capital for service providers to invest in growing their networks and prepare them for the mobile data services of the future. Consequences also include slow data transfer speeds, and stalled growth of the digital economy, which can hamper the government's attempt to drive the country into the Thailand 4.0 era.

dtac also held a series of interactive e-learning sessions on the company's endorsement of fair business competition for its employees. The program was called Say Yes to Competition and 95% of dtac's employees participated.

In 2017, dtac was granted the honor to collaborate with other telecommunications companies in upgrading the telecommunications system around Sanam Luang to ensure optimal voice and data connectivity was provided for Thai people who travelled there to the to visit the royal crematorium of the late H.M. King Bhumibol Adulyadej. Our engineers and technicians described it as the high point of their career, and the whole organization took immense pride in their successful upgrade of a system designed for a low-density urban area to one capable of handling millions of mourners. It highlighted that at the nation's most important moments, the networks we use to connect to one another remain some of Thailand's most critical infrastructure.

# The more our world connects, the more security it requires

## Privacy policy and data security for customers

Our online world has grown to the point where it is a parallel virtual life. We meet our friends in chat rooms, get work done in the cloud, and complete payments via mobile applications. As the amount of personal information we store online increases, so do the risks. Ask yourself this: how well do these services keep your information safe and confidential?

According to the 2017 Electronic Transactions Development Agency (ETDA)'s behavioral survey, Thailand recorded an average usage of 6.5 hours of internet usage per person primarily on social media platforms, such as LINE, Facebook and Instagram, but also on video streaming platform YouTube. Other popular internet uses include search, e-mail and online shopping.

dtac's own survey reports that Thai users consumed 5GB of data per month in 2017, an increase of 25 times over the course of four years and 2.6 times compared to 2016.

Such a heavy amount of internet use suggests a proportional increase in the transmission of ID numbers, addresses, banking details and contact numbers—and therefore an increased risk of data breaches, hacking and scams. In response, dtac has made data privacy a key priority for our sustainability efforts.



### Best-in-class IT security system

dtac continually adjusts its security policy and measurement under ISO/ICE 27001 standards regarding information security management, particularly the tracking of system attacks and downtime management in line with our Business Continuity Plan (BCP).

**These highly advanced standards and policies are translated into safety operation procedures, as follows:**

- Ensure IT risk management through evaluations, records, risk tracking and report to the management
- Define strict security requirements to improve work systems
- Hold an evaluation and a review of information security procedures
- Establish a Security Operation Center to monitor and detect anomalies and security violations on a 24-hour basis
- Enforce necessary measurements to handle and retaliate against cyber attacks



## Enforce a privacy policy for customers

The attempt to protect personal information given to dtac by customers has led to the implementation of our Privacy Policy 2017, which covers all procedures involving the customers' personal information – from data collection, data processing to data sharing with third parties. The processes under the Policy include:

- The Privacy Policy 2017 has been announced on dtac's website for public access via [https://www.dtac.co.th/document-upload/Privacy\\_notice\\_th\\_29-06-16.pdf](https://www.dtac.co.th/document-upload/Privacy_notice_th_29-06-16.pdf).
- Call Detail Record (CDR), call history and related data will be secured with passwords.
- A restricted area will be set up and monitored closely by only authorized staff to ensure that all documents stored in the area is kept safely.
- For any assignment that requires access to crucial customer data, only two dtac employees will be granted the operational codes for security purposes and a limited scope of investigation.
- There will be specific staff appointed to ensure that all data processing is carried out properly in compliance with the Privacy Policy and the laws.
- Corporate technical procedures and security actions will be prepared to protect customers' personal information from unauthorized access, storage, utilization, disclosure, duplication, modification and destruction. A specialized security team will conduct regular security checks, and execute data safety measures at the call center by forbidding employees from bringing personal USB flash drives and mobile phones into the center.
- dtac will only use customers' personal information for development purposes, particularly to improve customer experience or adapt to new service opportunities.
- dtac may share the personal information to its subsidiaries for processing only when such action is necessary for service development. The information, however, will only be shared with the customer's permission.



## dtac staff must protect customers' privacy.

Each individual dtac employee is also obliged to take the issue of privacy seriously and attend the related training sessions as required. Beyond the front-line operational environment that has ready access to customers' personal information, all dtac employees are required to sign a confidentiality agreement to protect the customers' privacy as specified in the Company's Code of Conduct. Ability to access the customers' personal information is subject to the employee's department and responsibility. Random checks are also performed as part of the measurement. If any employee is found to have made an unauthorized access to client information, dtac will suspend his/her rights to access the data and proceed with an investigation immediately.

In addition, dtac has arranged a series of eight training sessions on the maintenance and protection of customers' personal information for a total of 700 employees. The company also communicates the importance of these measures to the employees on internal communication channels including radio and billboards, and assesses involved employees' awareness on the subject.

# Our operations must not negatively impact society

## Network expansion on the grounds of social responsibility

The expansion of communication towers is essential for telecommunication. It is also the core infrastructure of the Thailand 4.0 policy, allowing Thai people to enjoy the benefits of a more connected future.

In 2017, dtac built 4,011 cell towers, which is nearly double the roll-out rate of previous years. Prior to any construction and installation, we reach out to the surrounding community to build a

mutual understanding and share accurate information about electromagnetic fields (EMF).

To minimize the cell towers' impact on nearby residents, dtac has also formed an EMF working team to supervise the construction and installation process and ensure that all procedures are completed properly and legally without any deviation.

1. Research and specify the area for the cell tower installation

2. Enter into a contract with the landlord or the person in authority

3. Develop a shared understanding of EMF with the community members

4. Apply for a construction license from the local government agency and obtain permission from NBTC.



5. Select a construction company and contractor(s) that strictly follows all regulations to ensure that the telecom tower construction meets engineering, labor and safety requirements

6. Launch the communication tower

7. Have an expert team perform regular checks and periodical maintenance to ensure safety and efficiency of the tower



Total Access Communication PLC.

In 2017, dtac employed a new sourcing method to find potential locations for communication tower locations called Flip for Site internally, and publicly known as My Best Network. Developed using the agile method, the innovative platform uses crowdsourcing to rapidly acquire information on potential sites. It was one of the projects presented during dtac's internal Flip It Challenge where all employees were invited to submit disruptive solutions to existing pain points and quickly develop these ideas.

The sourcing process for communication tower sites usually takes 2–3 months to complete, and in some cases the process eventually fails because the landlord cannot be contacted or verifiably confirmed. To solve the issue, the team launched a web page on [www.dtac.co.th/mybestnetwork](http://www.dtac.co.th/mybestnetwork) to enable people to suggest the potential areas for dtac's communications towers installation. dtac staff will then reach the contact person and proceed with area analysis and surveys at the actual site. The innovative functionality allowed over 11,000 people nationwide to contribute to dtac's efforts of building the best possible network for our customers.

Not only the Flip for Site project is a faster and easier way to find cell tower locations, it also allows the company to secure sites that are better positioned to offer the best possible coverage at the lowest possible cost. Flip for Site rewarded landlords with a new source of income and users who submitted valid leads were given a 10,000 baht reward.

With the power of technology and the out-of-the-box thinking of its digitally-minded employees, dtac created a community-friendly initiative that rewards everyone: the landlords, those who submitted their contact details, and the surrounding community which gets better coverage.



Sustainability Report 2017



# 7 SUPPLY CHAIN SUSTAINABILITY

Total Access Communication PLC

Sustainability Report 2017



“Our suppliers  
are friends who grow  
with us.”

## Supply Chain Sustainability

Being attentive to those around us is an essential first step to sustainability. It allows us to recognize that problems may arise from various external factors no matter how much effort and care we put into our work. For a large corporation that works closely with many suppliers, our focus must widen to the full scope of the many stakeholders we engage with—not just our own operations.

Therefore, dtac has established eight rules that every supplier must abide to during dtac’s bidding process. This ‘Supplier Conduct Principles’ (SCP) is further supplemented by an Agreement on Responsible Business Conduct (ABC). If dtac finds any violation of the SCP or ABC, dtac has the right to terminate its contract with the supplier.

One aspect of this initiative is to protect dtac from the risks that would come from being associated with unsustainable suppliers. But a careful review of the SCP also reveals how the standards enshrined in it help spread sustainable business practices beyond dtac and to our entire supply chain.

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# Supplier Conduct Principles

## Relationship with Applicable Laws

The supplier must be legally incorporated in adherence to the laws of Thailand.

## Human Rights

The supplier must not discriminate against a particular race, skin color and religion.

## Labor Rights and Working Conditions

The supplier must not engage in the use of forced labor, child labor and illegal labor. The company must provide for its employees proper care and welfare according to the law.

## Health and Safety

Companies contracted for construction or cell site maintenance operations with dtac must provide personal protective equipment for their employees. Other types of contracted companies must, for instance, have fire extinguishers in their buildings and conduct regular fire drills and emergency evacuation trainings.

These principles are not meant for dtac alone. They are a set of recognized standards that every business should adopt. Those who gain by abiding by this set of principles are not a single company or business entity, but society as a whole.

To achieve supply chain sustainability together, these principles cannot merely be on paper. Hence, dtac has set up a Supply Chain Sustainability team to focus on monitoring and assessing our suppliers to ensure successful compliance to the ABC and SCP.

In 2017, dtac set a target to conduct 500 supplier inspections. The procedures were primarily to inspect workers' conditions, safety and environmental measures as well as human rights commitments.

## Environment

The supplier must operate in an environmentally responsible manner. They must not cause pollution and must manage the waste they produce before disposal.

## Conflict Minerals and Unsustainable Mining Businesses

The supplier must obtain a lawful mining concession.

## Privacy, Freedom of Expression, and Confidentiality

The supplier must be able to protect confidential information.

## Ethical Dealings

dtac is against bribery, money laundering and any other forms of corruption. Any competition must always be carried out ethically and professionally

By the end of the year, dtac achieved its goal, conducting 562 inspections, of which 120 were with a notification prior to the visit and the other 442 were unannounced. Of the total number of suppliers receiving an inspection is 208, 93 of which were randomly selected while the remaining 115 were pre-determined by dtac. This accounts for 18.3% of our 654 suppliers.

In 2017, dtac found 35 major non-conformity cases and 232 minor non-conformity cases. These suppliers were immediately informed about the issues, and encouraged to take action to reconcile the issues. dtac proactively monitored their progress until the non-conformity issues were completely reconciled. In addition, dtac provides Capacity Building Program, a monthly comprehensive workshop on anti-corruption, environmental, labor standards, health and safety at workplace, to help suppliers increase and maintain skills in safety and responsible business practices. In 2017, dtac organized workshops totaling 2,559 hours of training which were attended by 2,238 suppliers' employees.

## Number of Suppliers Receiving Assessments on Responsible Business Practices (Human Rights, Fair Labor and Environmental Conservation)

Areas of Assessment	Number of Suppliers Assessed by Visiting Inspections	Number of Suppliers Assessed by Survey	Number of suppliers facing contract termination from violating the conduct (%)
Social Impact	120	281	0
Human Rights	120	281	0
Labor Rights	120	281	0
Environmental Impact	120	281	0

## Number of Suppliers Participating in Anti-Corruption Practice Training (Classified by Types of Business)<sup>(G4-S04)</sup>

Types of Business	Number of Suppliers (companies)
Construction, Installation and Maintenance Service Work for Base Stations and Fiber Cables	67
Printing and/or Media Production	2
Other Services	13
<b>Total</b>	<b>82</b>

# BB Technology



## “Jeerasit Lisuwan”

SHE Division Manager at BB Technology Company Limited has been providing cell site installation and maintenance services for dtac for over 10 years



We have a good professional relationship with dtac. They always share knowledge and good recommendations to our team members, leading us in the same direction



“BB Technology came to be dtac’s supplier through the regular sourcing process, which also included an evaluation of credible track records, financial performance and quality control principles. Then we signed the Agreement of Responsible Business Conduct and the Supplier Conduct Principles as a part of the contract.

“Over the years of working together, there has always been an exchange of technological knowledge and skills as well as updating each other on new trends in the telecommunications industry. This helps both dtac and BB Tech to adjust and continually improve ourselves to meet international standards in safe work environment. Now our

in-field workers and contractors are very aware of the safety measures. They use protective equipment, follow safety rules more carefully and work more professionally. Everyone agrees that this is important for them and their lives.

“BB Technology conducts regular safety inspections, which have resulted in a fewer number of accidents. We have achieved our zero accident goal for the past few years.

“We have a good professional relationship with dtac. They always share knowledge and good recommendations to our team members, leading us in the same direction so that we can grow together. If we work together, we thrive together.”

## “Jiang Zai Xing”

**Delivery Quality Assurance, Huawei Thailand, supporting Equipment & Service and Network Optimization for dtac since 2010**

“Before entering dtac’s supplier selection process, we understood well that dtac prioritizes safety and quality while showing strong concern for its social and environmental impacts. We adjusted the way we work to be up to their standards and added Huawei’s strength, our customer-centric way of work. With that, we were eventually selected as dtac’s supplier.

“After years of working with dtac, one of the most apparent changes we have seen is increased safety, especially in the operations levels. Workers are significantly more mindful. When go out to work, they are equipped with safety equipment such as proper shoes, first-aid kits and so on. And while working, they make sure they are not damaging the natural environment in the area. Moreover, Huawei has adopted the End-to-End (E2E) principle of collaboration. That is, prior to operation, all staff must pass a health examination and inspect the condition of their tools and equipment. They have to sign an inspection form to assure that the process has been followed. Then, Huawei’s Quality Control team will be the one to authorize the operations.

“To speak frankly, this level of safety standards requires a substantial budget, but our executives think it is worth the price because this is us taking care of the lives of our engineers, technicians and employees at every level. Their lives are invaluable. We just want to see everyone go home safely at the end of the day.

“In 2017, dtac provided four workshops on safety and responsible business practices such as human rights and anti-corruption commitments. We invited 127 Huawei employees and a group of outsourced workers to participate. We consider this as a collaborative effort with dtac to expand our knowledge and skills to other companies and services in the industry.

Huawei



**this level of safety standards requires a substantial budget, but our executives think it is worth the price because this is us taking care of the lives of our engineers, technicians and employees at every level. Their lives are invaluable. We just want to see everyone go home safely at the end of the day**



“Another impressive thing about working together is the opportunities to give back to society with dtac. For example, during the flood in the Southern region, back in July and August 2017, we worked with dtac to help and donate food supplies and emergency kits to the flood victims. For us, as a foreign company, it was such a meaningful experience to do social good for Thailand, especially for the rural communities, and to get to see people’s smiles and accept their thanks. This is also a reminder that no matter where we are, we can always do good for our fellow human beings. We must thank dtac for having us as part of this effort.”

# 8 ENVIRONMENT

Sustainability Report 2017

Sustainability Report 2017



# Lowest Environmental Impact

## Environment

Environmental conservation is key to dtac's sustainability efforts although the telecommunication industry does not directly or significantly impact environment. Still, dtac ensures proper environmental management standards through its policies and initiatives.

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# Think Smart Project: Recycle your old mobile phone wisely

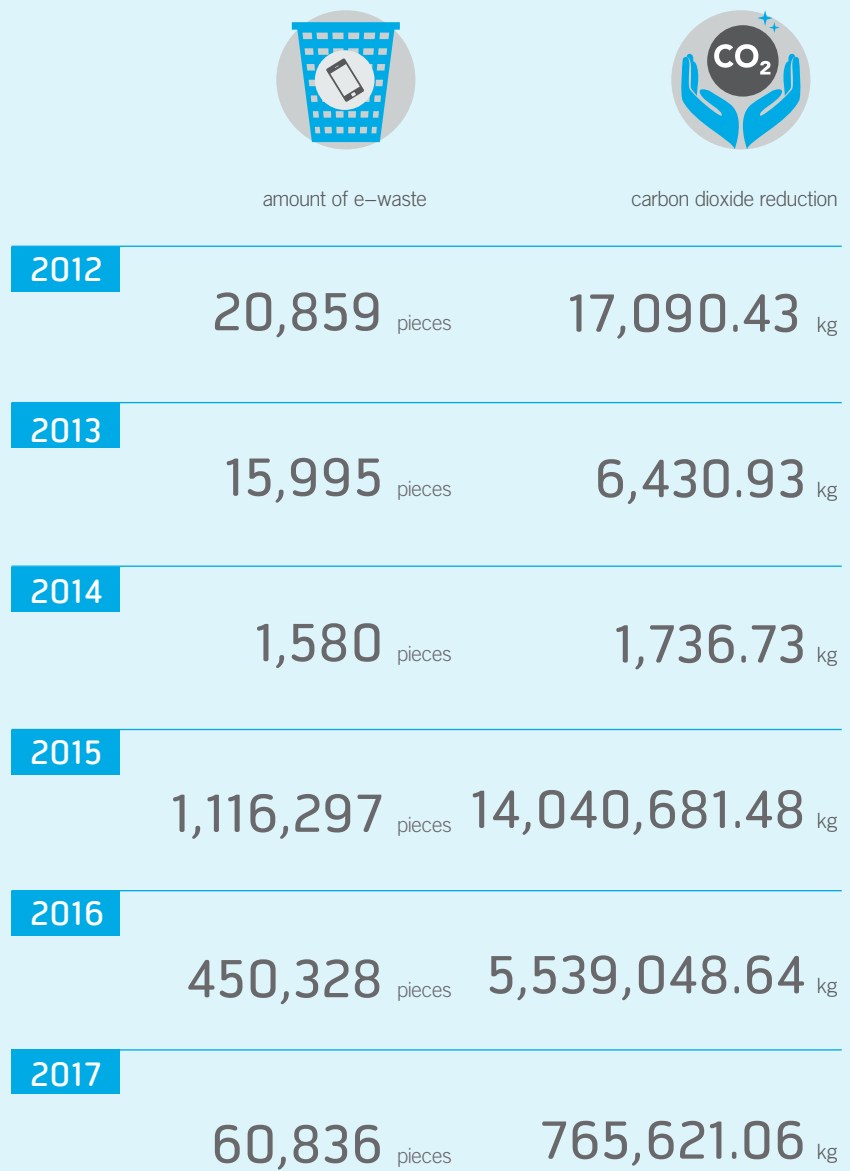


Electronic waste, or e-waste, must be separated from other types of waste as it can contaminate landfills. Improper disposal of e-waste therefore leads to environmental degradation. However, when it comes to our own smartphone, most of us don't know where to dispose of it to ensure it is processed properly.

dtac joined TES-AMM, a world-leading e-waste disposal and recycling service provider, to initiate and launch the ThinkSmart campaign to build awareness and take sustainably handle e-waste (such as mobile phone batteries, ear-phones, adaptors and appliances) disposal and recycling processes that are safe to environment.

The ThinkSmart e-waste disposal boxes can be found at 49 dtac hall branches nationwide and one box at the SCG Headquarters. In 2017, dtac partnered with Bangkok Metropolitan Administration, Pollution Control Department and Tesco Lotus to increase e-waste dropping points by placing the ThinkSmart disposal boxes at seven branches of Tesco Lotus. The total e-waste collection reached the goal of 60,836 pieces weighing 5,983kg. This could reduce carbon emissions by 765,621kg of CO2 equivalents.

## The amount of e-waste per year





## dtac e-invoice

dtac has been operating the e-invoice campaign for three consecutive years. The objective of this campaign is to reduce the carbon footprint and deforestation caused by paper-based invoice. dtac encourages postpaid customers to subscribe to electronic invoices instead, which are sent via email, SMS, and the dtac application.

In 2017, there were 1.7 million e-invoice subscriptions which helped reduce the use of paper by around 20.3 million sheets. The campaign helped reduce carbon emissions by 84,000 kg of CO<sub>2</sub> equivalents.

Customers may subscribe to e-Invoices at <https://my.dtac.co.th/einvoice> or by SMS at 4079111.



## Water and Energy Conservation Project

When talking about environmental sustainability, we do not only refer to forests, rivers and oceans. dtac also believes that good environmental management within its facilities can also contribute to the environmental sustainability. We have ensured policies and practices to reduce water and energy consumption in every building where dtac has business operations.

In addition, we ensure that our environmental management complies with the ISO 50001 Energy Management and is in accordance with the framework of Department of Alternative Energy Development and Efficiency. dtac has set up an energy working team to assess, make policies, take action, monitor and measure energy consumption for every building that dtac has established business operations in to ensure effective and efficient use of energy.

dtac employees are encouraged to actively participate in many internal engagement campaigns. Energy saving is one of them. Every year, an energy conservation goal and action plan is cascaded to all employees at all levels. So, every employee shares responsibility to help dtac achieve the energy consumption and environmental conservation.



Actions Taken to Reduce Energy Consumption	Energy Consumption of the original products and services (GJ)	Energy Consumption of the new products and services (GJ)	Energy Reduction Achievements
Adjust Chiller Set Point from 45 F to 47 F Adjust Current Limit Set Point to 70 % Reduce the running time of Chiller from 24 cm to 16 cm (per year)	4,199,964.48	2,974,074.84	1,224,989.64 or 29.17%
Changed the streetlights to LED (DTAC RST) (per month)	9,460.80	3,880.00	5,572.80 or 59%

## Total Weight of Waste

Types of Waste	Disposing Method / Disposer	Amount of Waste
<b>Non-hazardous waste</b>		
General waste	Reuse	N/A
	Recycle	41 Tons
	Landfill	269 Tons
<b>Hazardous waste</b>		
Light bulbs	Landfill	2.23 Tons
Spent batteries	Recycle	531 Tons
E-waste	Recycle	256 Tons

## The Organization's Energy Consumption

Energy Consumption	Amount of Energy Use (J)			
	2014	2015	2016	2017
<b>Total amount of fuel use (Litre converted to GJ)</b>				
• Amount of fuel use from fleet and the company's cars	129.12	173.36	284.53	217.66
• Amount of fuel for the generator	N/A	47.95	66.13	48.66
<b>Total amount of electric power use (kWh converted to GJ)</b>				
• Amount of electric power use in the buildings	30.91	24.99	26.31	31
• Amount of electric power use at Cell Site	1,209.09	1,286.16	1,730.79	1888.77
<b>Total amount of electric power use in the organization</b>	<b>1,369.12</b>	<b>1,532.46</b>	<b>2,107.76</b>	<b>2,181.09</b>



# 9

## Other Policies and Progress

# Stakeholder Engagement

dtac always advances its business operations and processes to bring sustainable growth with a strong effort to make a positive impact on the country's economic, social and environmental development, both directly and indirectly.

To ensure that its business operations and processes go in a direction that benefits Thailand as a whole, dtac categorizes major stakeholders into eight groups: shareholders and investors, employees, communities and society, customers, suppliers, creditors, government agencies and regulators.

As dtac strongly values stakeholders' needs and concerns, which can clearly reflect the impact of dtac's business operations, and to ensure that the engagement remains effective, dtac has created a framework of engagement for each stakeholder group. The framework shows the expectations, activities and achievements of the stakeholder engagements for all eight groups.



# Stakeholder Engagements

Engagement Channels (G4-26)	Expectations and Concerns (G4-27)	Engagement Activities (G4-27)	Acheivements
<b>Shareholders and Investors</b>			
<ul style="list-style-type: none"> <li>• Annual shareholder meeting – 1 per year</li> <li>• Teleconference to announce quarterly business performance – 1 per quarter</li> <li>• Quarterly analyst meeting – 1 per quarter</li> <li>• Roadshows or outside meetings with local and international shareholders and investors – 10 meetings in 2017</li> <li>• Meetings with investors at dtac Head Office – 82 meetings in 2017</li> <li>• dtac Investor Relations webpage – regularly updated</li> <li>• E-mails and telephone calls – daily</li> </ul>	<ul style="list-style-type: none"> <li>• Fair treatment to all shareholders and investors</li> <li>• Accurate, timely and easy-to-access information disclosure</li> <li>• Improvements in business performance to bring financial growth to shareholders and investors</li> <li>• Regular dividend payments</li> </ul>	<ul style="list-style-type: none"> <li>• Comply with guidelines and regulations required by Stock Exchange of Thailand and the Office of Securities and Exchange Commission</li> <li>• Ensure operations under the good governance and responsible business practices</li> <li>• Ensure investment for growth</li> <li>• Ensure dividend payment policy</li> <li>• Provide various communication channels</li> <li>• Actively participate in roadshows and conferences to maintain engagement with shareholders and investors.</li> </ul>	<ul style="list-style-type: none"> <li>• Excellence' in corporate governance of listed companies evaluated by Thai Institute of Directors</li> <li>• Listed in 'Thailand Investment' stock</li> <li>• Listed in SET50 Index</li> </ul>
<b>Employees</b>			
<ul style="list-style-type: none"> <li>• Employee Engagement Survey – 1 per year</li> <li>• Organizational Culture Survey – 1 every 2 years</li> </ul>	<ul style="list-style-type: none"> <li>• Change Management</li> <li>• Skills Development</li> <li>• Evaluation</li> <li>• Employee Reward, Benefits and Welfare</li> </ul>	<ul style="list-style-type: none"> <li>• Cascade organizational change management and strategies to all employees</li> <li>• Improve Change Management training areas for manager-level employees</li> <li>• Enhance customer management skills and capabilities in customer-facing employees</li> <li>• Develop employees' learning journey to help employees grow consistently</li> <li>• Advance performance evaluation model to ensure clarity, relevance and effectiveness</li> <li>• Improve policy and management on employee reward and welfare to remain competitive in the market</li> <li>• Promote fair treatment and equality to all employees</li> <li>• Fair and market competitive reward and compensation scheme</li> <li>• Provide benefits and welfare as required by and above laws</li> </ul>	<ul style="list-style-type: none"> <li>• 2017 Engagement Index – 79%</li> <li>• 2017 Enablement Index – 82%</li> </ul>



Engagement Channels (G4-26)	Expectations and Concerns (G4-27)	Engagement Activities (G4-27)	Acheivements
		<ul style="list-style-type: none"> <li>• Organize dtac People Council to support employer–employee communication bridge</li> <li>• Empower Health, Safety, Security and Environment (HSSE) team to improve policies and initiatives to promote better wellbeing in employees and environmental management</li> <li>• Promote awareness and learning in digital disruption in employees and cultivate the ‘Be a Disruptor’ culture with ‘Digital Disruptive Day’ activities</li> <li>• Promote new work skills for the ‘Extended Management Committee’ with the ‘Strategy Executive Online’</li> </ul>	
<b>Communities and Society</b>			
<ul style="list-style-type: none"> <li>• Site visits to ensure mutual understanding in local communities about their interests and concerns – more than 1,000 visits</li> <li>• Collaborate with national and local government agencies to organize community development activities – more than 5,000 activities</li> <li>• Collaborate with civic organizations to promote awareness and skills development in children about safe internet use – 48 trainings</li> <li>• Engage with civic organizations, government agencies, media and influencers to develop strategies for reducing inequalities through Smart Farmer project operation – 1 session</li> </ul>	<ul style="list-style-type: none"> <li>• Safety issues concerned with network expansion operations, e.g. electromagnetic wave emission from base towers</li> <li>• Work skills development and quality of life improvement</li> <li>• Awareness and skills to avoid improper use of online media and internet</li> <li>• Digital and information technology skills</li> <li>• Smart Farmer project promotes inequality reduction in various issues</li> </ul>	<ul style="list-style-type: none"> <li>• Provide information and studies about electromagnetic field to local communities prior to network tower constructions</li> <li>• Develop an online chatroom ‘Stop Bullying Love Care Station’ for children and youth to receive counseling and help from child psychologists and counselors on issues like bullying, physical abuse and relationships</li> <li>• Develop ‘dtac Family Care’ mobile application as a tool to help parents control their children’s mobile data use and track their location</li> <li>• Develop strategies and collaborations with government agencies, civic and business organizations to strengthen the Smart Farmer project to help small farmers become entrepreneurs with an access to information technology, useful data, skills and knoweldge to improve their household income and quality of life</li> </ul>	<ul style="list-style-type: none"> <li>• 80% of children who underwent the training increased awareness in negative impacts from improper use of internet and increased self–protection skills</li> <li>• Launched ‘dtac Family Care’ mobile application with 42,815 downloads</li> <li>• Farmers in the Smart Farmer project increased income by 15% on average</li> </ul>

Engagement Channels (G4-26)	Expectations and Concerns (G4-27)	Engagement Activities (G4-27)	Acheivements
<b>Suppliers</b>			
<ul style="list-style-type: none"> <li>• Annual opinion self–assessment survey by suppliers (Annual SAQ) – 1 survey in January</li> <li>• Regular inspections to ensure suppliers’ work operations is in line with the Supplier Conduct Principles (SCP) at their office and operational sites – 562 inspections in 2017</li> <li>• Provide training and workshops to ensure understanding and skills to comply with the SCP – 2559 training hours in 2017</li> </ul>	<ul style="list-style-type: none"> <li>• Fair treatment to all suppliers</li> <li>• Fair and transparent sourcing and procure–ment process</li> <li>• Business partnership confidentiality agree–ment to protect infor–mation about new products and initiatives,</li> <li>• Knowledge and skills to comply with the SCP , e.g. in HSSE, fair labor practice and anti–cor–ruption policy</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure fair treatment practices to all suppli–ers</li> <li>• Ensure sourcing and procurement practic–es and procedures in written contracts for mutual understand and assurance of se–lection process. Ensure bidding process in written document.</li> <li>• Ensure compliance of the SCP in suppliers, particularly in areas of, for example, safety, security, environmental conservation and anti–corruption. The conduct is designed based on best international practices.</li> <li>• Honor suppliers’ intellectual property of suppliers and third parties by ensuring dtac employees at all levels will not violate sup–pliers’ and third parties’ intellectual prop–erty as indicated in dtac Code of Conduct</li> <li>• Regular visits to inspectt and invite the suppliers to participate in a self–assessment questionnaire to uplift suppliers’ business operations standard and sustainable growth</li> </ul>	<ul style="list-style-type: none"> <li>• Conducted inspection at 38.1% of suppliers to ensure compliance of the SCP, par–ticularly in the areas of safety, fair labor, human rights, an–ti–corruption, and environ–mental conservation practices.</li> <li>• 2,238 employees of suppliers participated in the capacity building training about the Supplier Code of Conduct and other issues, total of 2,559 training hours.</li> </ul>

Engagement Channels (G4-26)	Expectations and Concerns (G4-27)	Engagement Activities (G4-27)	Achievements
<b>Customers</b>			
<ul style="list-style-type: none"> <li>• 479 contact points (dtac halls and dtac centers) nation-wide centers and 24-hour-service dtac Call Center 1678</li> <li>• Online contact channels which include corporate website, e-mail, social media community (e.g. Facebook and Line), and a team to monitor and provide information to customers in public webboards, such as Pantip</li> <li>• Customer survey in CSAT (Customer Satisfaction Scoring) score format which reflects customers' satisfaction after receiving a service via dtac call center 1678, online channels and dtac halls – 100%</li> <li>• CFL (Closed Feedback Loop) is conducted when receiving a low satisfactory score by contacting back the customer to obtain feedback and recommendations to improve service quality – 25% of randomly selected customers who provide low satisfactory score</li> </ul>	<ul style="list-style-type: none"> <li>• Service quality and capabilities of employees</li> <li>• Service quality and capability improvement</li> <li>• Various products to meet different customers' purposes available at fair price</li> <li>• Customer data privacy</li> </ul>	<ul style="list-style-type: none"> <li>• Contact customers who provide low satisfactory score to understand their concerns, find solutions and improve service quality</li> <li>• Ensure fair customer treatment policy with professional service quality and manners to reflect the 'Customer Centricity' principle</li> <li>• Organize internal campaigns to engage employees in the service quality improvement process directly and indirectly and to cultivate service-mind organizational culture, such as the Customer First Hero campaign</li> <li>• Ensure customer data privacy policy practice by setting up a strict data access procedure that embraces strict discretion. The access is strictly limited to very few authorized individuals and for extremely significant operations, service improvements and product development objectives only.</li> </ul>	<ul style="list-style-type: none"> <li>• 2017 CSAT Score (survey from customers who received a service via the Call Center 1678 and dtac halls) at 90%</li> </ul>
<b>Creditors</b>			
<ul style="list-style-type: none"> <li>• Participate in quarterly analyst meeting – 1 every quarter</li> <li>• Share information and news through meetings, teleconferences, e-mails – as needed</li> </ul>	<ul style="list-style-type: none"> <li>• Comply with the contract terms &amp; conditions and regulations</li> <li>• Fair treatment to all creditors</li> <li>• Accurate and transparent information</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure fair treatment practices to all creditors by providing all with accurate and transparent information</li> <li>• Comply with contract terms &amp; conditions</li> </ul>	<ul style="list-style-type: none"> <li>• Strictly maintain business continuity by complying to all creditors' terms &amp; conditions</li> </ul>

Engagement Channels (G4-26)	Expectations and Concerns (G4-27)	Engagement Activities (G4-27)	Acheivements
<b>Government Agencies</b>			
<ul style="list-style-type: none"> <li>• Support and participate in activities organized by government agencies</li> <li>• Participate in meetings to maintain relationships</li> <li>• Open House</li> <li>• Organize meetings, workshops, conferences and discussion panels</li> <li>• Participate in working team as a representative of an expert and a stakeholder in telecommunication industry</li> </ul>	<ul style="list-style-type: none"> <li>• Develop and maintain relationships at all levels through participation of activities, meetings, visits, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintain positive collaboration and relationship by participating in the making process of public policies that reflect good governance, legitimacy and corporate image</li> </ul>	<ul style="list-style-type: none"> <li>• Deployed Netarsa project to provide skills training in use of internet to generate income and increase quality of life in a train-the-trainer format.</li> <li>• Signed an MOU with 4 government agencies: Ministry of Commerce, Ministry of Education, Ministry of Agriculture and Agricultural Cooperatives and Ministry of Digital Economy and Society – to advance local small and medium business with digital technology</li> <li>• Participated in ICT Youth Challenge 2017</li> <li>• Encouraged Telecommunications Association of Thailand to advocate the government with academic knowledge and collection of public opinions to support the Thailand 4.0 vision drive</li> <li>• Partnered with international organizations, like ITU GSMA, to organize workshops and seminars</li> </ul>
<b>Regulators</b>			
<ul style="list-style-type: none"> <li>• A monthly meeting for 2.1 GHz licensees to update operations progress under the licensing conditions – monthly</li> <li>• Public hearings on NBTC's draft rules and regulations – every public hearing</li> <li>• Monthly working committee meetings – monthly</li> </ul>	<ul style="list-style-type: none"> <li>• Comply with NBTC's rules and regulations</li> <li>• Participate in policy and regulations development process</li> <li>• Provide support to NBTC and national security agencies' initiatives</li> </ul>	<ul style="list-style-type: none"> <li>• Engage with NBTC to discuss and update challenges in the regulations and practices</li> <li>• Share dtac's standpoints and justifications in rising issues and provide best practices of international standards</li> <li>• Provide technical information from research and studies to NBTC to support policy planning process and collaborate with national security agencies as required by laws</li> </ul>	<ul style="list-style-type: none"> <li>• Provide support to NBTC and other government agencies to ramp up mobile signalling capacity around the royal cremation ground to handle an anticipated surge in signal traffic for people who came to the passing of His Majesty the King</li> <li>• NBTC approved reduction of license fee and USO Fund fee.</li> <li>• NBTC announced preparation for the auction of the spectrum concession that would be expired in September 2018.</li> <li>• dtac Trinet received Telecom License Type 1 to operate Leased Line service</li> </ul>

# Business Continuity Planning : BCP

Providing telecommunication service continuity is an important responsibility for dtac. Thus, dtac has a strong business continuity plan in place to ensure continuity of communication and information services. dtac continually evaluates and predicts possible risks and circumstances that may disrupt the network and how it may affect other business operations such as data storage, billing system and customer services.

The business continuity plan is strengthened with the Network Management System as well as procedures for network and equipment maintenance to ensure efficient voice and data services. In addition, a contingency plan is in place. dtac does not hesitate to invest in significant and more effective equipment and systems to enhance operations capabilities, such as fire-protection system, network control and real-time reporting systems. dtac also provides training to employees to stay vigilant and comply with the procedures and guidelines.

# Fair Marketing Communication

dtac places importance on communicating fair and accurate information about our products and services to the public via our various communication channels. Miscommunication or unclear information about the products and services may cause risks to credibility, trust and branding.

Therefore, dtac has strictly abided by the Consumer Protection Act B.E. 2522 as amended by the Consumer Protection Act (No. 2) B.E. 2541. Consumers have a full right to receive accurate and adequate information, description and advertisement in order to make decisions. Therefore, dtac provides clear information as below. (G4-PR7)

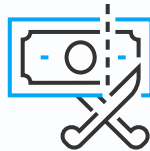
Information	Description	Postpaid	Prepaid	Mobile phone
Price	Provide Clear Pricing	✓	✓	✓
Plan details	Clarify package with details	✓	✓	✓
Service conditions and sales promotions	Clear and fair terms & conditions, purchase methods or service procedures, durations, or possible additional charges	✓	✓	✓



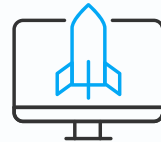
# Supporting Access to Technology for the Socially Underprivileged (SIMs for Minorities)

dtac plays a part in supporting the socially underprivileged in gaining access to telecommunications services to elevate their quality of life. In cooperation with the Office of the National Broadcasting and Telecommunications Commission (NBTC) and the Ministry of Social Development and Human Security, dtac started an initiative to facilitate the access to telecommunications services of people with disabilities. A registration system was put in place to specify eligibility for people with disabilities to receive phone numbers with special privileges. In 2017, 421 numbers were registered.

## Benefits offered to people with disabilities include:



- At least 10% discount for mobile services from normal rates



- No less than 1 Mbps of Internet speed for every data plan throughout the bill cycle (a minimum speed rate which can be used without speed drop)



- Additional 10% bonus for prepaid customers and 10% discount for postpaid customers



- One person with disabilities is eligible for one number per carrier.

# Recruitment

dtac has ensured our recruitment guidelines comply with both our company policies and human resources planning. The recruitment and selection process is based on grounds of equality and fairness whereby knowledge and capability are the top considerations. Preferential treatment is strictly forbidden. In 2017, dtac had a total of 4,452 employees, including 4,173 full-time employees and 279 contractors. The following is our employment statistics(G4-LA1):

## Statistics of new recruits

Details	2014		2015		2016		2017	
	Number (Persons)	Percentage	Number (Persons)	Percentage	Number (Persons)	Percentage	Number (Persons)	Percentage
<b>New recruits by gender</b>								
Male	155	3.41	177	3.76	146	3.39	129	2.89
Female	197	4.33	179	3.80	255	5.93	212	4.76
<b>New recruits by age</b>								
< 30	137	3.01	90	1.19	159	3.70	152	3.41
30 – 50	215	4.73	264	5.61	242	5.63	187	4.20
> 50	0	0	2	0.04	0	0	2	0.04
<b>New recruits by region</b>								
Central	276	6.07	286	6.08	354	8.23	273	6.13
Provincial	76	1.67	70	1.49	47	1.09	68	1.52
Overseas	0	0	0	0	0	0	0	0
<b>Total</b>	<b>352</b>	<b>7.74</b>	<b>356</b>	<b>6.84</b>	<b>401</b>	<b>9.33</b>	<b>341</b>	<b>7.65</b>

## Statistics of Employee Turnover

Details	2014		2015		2016		2017	
	Number (Persons)	Percentage	Number (Persons)	Percentage	Number (Persons)	Percentage	Number (Persons)	Percentage
<b>Employee turnover by gender</b>								
Male	157	3.45	171	3.63	393	9.14	355	7.97
Female	269	5.91	215	4.57	528	12.28	523	11.74
<b>Employee turnover by age range</b>								
< 30	47	1.03	56	1.19	96	2.23	270	6.06
30 – 50	370	8.13	319	6.78	796	18.51	594	13.34
> 50	9	0.20	11	0.23	29	0.67	14	0.31
<b>Employee turnover by region</b>								
Central	357	7.85	309	6.57	697	16.21	632	14.19
Provincial	69	1.52	77	1.64	224	5.21	246	5.52
Overseas	0	0	0	0	0	0	0	0
<b>Total</b>	<b>426</b>	<b>9.37</b>	<b>386</b>	<b>8.21</b>	<b>921</b>	<b>21.42</b>	<b>878</b>	<b>19.71</b>

## Percentage of the company's board of directors (G4-LA12)

	By gender		By age		
	Male	Female	>30	30–50	<50
<b>Board of directors (percentage)</b>	66.66	33.33	–	25	75



## Percentage of employments by position levels(G4-LA12)

	By gender		By age		
	Male	Female	>30	30-50	<50
High-level executives (CEO, EVP, SVP)	14	33		39	8
Mid-level executives (VP-AVP)	205	181	1	357	28
Operational officers (SM-Staff)	2518	1418	820	3126	53
Others (Maid/Driver/Messenger)	7	13		13	7

In 2017, dtac trained 5,762 employees, on an average of 15.60 hours per employee. Details are as follows:

## Average training hours per employee (G4-LA9)

Average training hours	2015	2016	2017
<b>By gender</b>			
Male	29.80	14.20	19.10
Female	23.80	16.30	13.40
<b>By positions</b>			
High-level executives	29.70	14.60	28.10
Mid-level executives	29.00	19.0	28.30
Operational officers	25.10	14.50	11.40
<b>Average training hours per employee</b>	<b>26.10</b>	<b>15.50</b>	<b>15.60</b>

In addition to professional and work skills development, dtac also provides life and financial skills necessary for post-employment living. The "Investment Changes Lives" course was arranged to educate employees on financial management, investment, as well as debt management, to prepare them for a happy retired life. A total of 112 employees attended the course. (G4-LA10)

Dtac also conducts evaluation on training course effectiveness by tracking employees' achievements in applying new knowledge and skills to their job that reflects in their KPIs. All employees (100%) must participate in this evaluation..(G4-LA11)

# Benefits and Welfare (G4-LA2)

dtac promotes fair and proper benefits and welfare for employees accordingly to positions and types of employment, including fundamental rights stipulated by the labor law, basic welfare, and extralegal privileges, as detailed below:

## Leaves:

- Annual leave
- Personal and funeral leave
- Religious activity leave
- Maternity leave – 180 days
- Paternity leave
- Marriage leave
- Community service leave

## Benefits:

- Provident Fund
- Life and accident insurance
- Health insurance and Special Life Insurance for Employees in Risky
- Dental and eyes care
- Annual health checkup
- In-house Clinic and Nursing
- Employee Share Program
- Cooperative Savings
- Mobile Phone at Discount Rate

## Welfare:

- Childbirth grant
- Wedding grant
- Ordination grant
- Funeral grant for the death of immediate family members
- Funeral grant for employee's death
- Gifts for Employees admitted to Hospital
- Disaster relief allowance
- Mobile Phone and Data Package

dtac has set up a provident fund to support the Post-Employment Financial Plan for employees. The fund comprises of the employee's monthly contribution and dtac's monthly contribution. It is entirely separated from the assets of the company and its subsidiaries; the contribution made by the company is booked as an expense when incurred in the year.

dtac and subsidiary companies calculate liabilities by using the Projected Unit Credit Method. In 2017, dtac reserved THB 114.1 million for the provident fund contribution and other post-employment benefit plans, sufficient for the number of employees entitled to the plan.

dtac supports work–life balance in employees and promotes children’s rights to receive proper care from parents. Therefore, dtac provides 180–day maternity leave with full salary payment rather than the 60–day leave stipulated by law. Data from recent years

Type of Leaves	2014		2015		2016		2017	
	Male	Female	Male	Female	Male	Female	Male	Female
Number of employees entitled to maternity and parental leave (pax)	1,758	2,695	1,911	2,782	1,727	2,574	1,612	2,561
Number of employees who use maternity and parental leave (pax)	41	96	23	113	28	142	31	139
Number of employees who resume work after maternity and parental leave (pax)	41	96	23	113	28	142	31	139
Number of employees who return to work after maternity leave and remain in employment for one year (pax)	41	95	23	113	28	142	31	139
Employees returning to work who remain in employment after maternity and parental leave (%)	100	100	100	100	100	100	100	100

## Health, Safety, Security and Environment (HSSE) at work

dtac’s stance on occupational health and safety is to strictly follow the HSSE related laws as well as applying international standards such as OHSAS18001 and ISO14001 to ensure clear and strong HSSE measures. dtac has formed a Welfare Committee and a Safety Committee, as required by law. It also has the Health, Safety, Security and Environment Department (HSSE) to ensure HSSE policies and monitor HSSE measures that can minimize risks as well as increase awareness and skills in employees through trainings and awareness efforts. The committees consist of personnel representatives as shown below.(G4–LA5):

Committee	Roles and responsibilities	Chamchuri Square Building area		Sri Nakharin Call Center Building area		Rangsit Khlong 5 Call Center Building Area	
		Employerrep (%)	Staff rep (%)	Employerrep (%)	Staff rep (%)	Employerrep (%)	Staff rep (%)
Health, Safety, Security and Environment Committee	<ul style="list-style-type: none"> <li>• Consider workplace safety and non-occupational safety policies and programs, and report to employer on prevention and minimization of workplace hazards, illness, or grievances caused at work or from working in unsafe environment.</li> <li>• Report and make suggestions to employer on new measures or changes needed to make workplace safety and safety code meet standard required by law in order to ensure workplace safety of employees, contractors and third parties who come to service site.</li> <li>• Promote and support workplace safety-related activities organized by service site.</li> <li>• Consider principles and manual according to Article 3 as well as safety standards of service site and report to employer.</li> <li>• Inspect service site's workplace safety procedures and examine workplace hazard and accident statistics at least once a month.</li> <li>• Consider project or plan to arrange workplace safety workshop(s) as well as project or plan to arrange workshop(s) on all levels of personnel's roles and responsibilities for workplace safety, and report to employer.</li> <li>• Set up system that requires all employees to report on workplace hazards and risk-prone working conditions.</li> <li>• Follow up on reports and plans submitted to employer.</li> <li>• Submit annual performance report to employer after one year completion. Report shall include problems and difficulties encountered on the job and suggestions to employer.</li> <li>• Evaluate service site's performance in workplace safety procedures.</li> </ul>	50	50	50	50	50	50

Committee	Roles and responsibilities	Chamchuri Square Building area		Sri Nakharin Call Center Building area		Rangsit Khlong 5 Call Center Building Area	
		Employer rep (%)	Staff rep (%)	Employer rep (%)	Staff rep (%)	Employer rep (%)	Staff rep (%)
Health, Safety, Security and Environment (HSSE) Unit	<ul style="list-style-type: none"> <li>• Create procedures to eliminate hazards and risks at service site, and guarantee their regular practice.</li> <li>• Make suggestions on accident and hazard prevention, and control risks in service site.</li> <li>• Provide workplace safety manual and standards in service site to aid employees and personnel involved.</li> <li>• Propose to employer types of protective equipment suitable for particular work and risks in order to enforce usage among employees and personnel involved.</li> <li>• Promote and support academic programs and work of related agencies in service site to safeguard employees from illness, injuries and hazards from work, including fire and severe accidents.</li> <li>• Organize workshop(s) on foundations of and procedures for workplace safety for new employees before they start working and for employees taking on new tasks that differ from what they are used to and may be hazardous.</li> <li>• Coordinate with different units and agencies, internal and external, including related government agencies, to evaluate service site's overall performance on workplace safety and security system.</li> <li>• Gather performance evaluations of security officers of all ranks and follow up on performance on workplace safety to ensure its development follows service sites's policy and plans.</li> </ul>	-	-	-	-	-	-

In addition, dtac has assigned the HSSE Department to keep statistics on employees' workplace accidents and analyze risks of sickness and injuries to ensure employees' safety and welfare. HSSE is also entrusted to seek preventive measures by taking following actions:

## Risks from Sickness and Injuries at Workplace

Employees (by Workplace Types)	Health and Injury Risks	Health and Injury Risk Mitigation Initiatives
Office-based Employees	Office Syndrome	<ul style="list-style-type: none"> <li>• Exhibition about Office Syndrome</li> <li>• Publicize general information, news and studies about the Office Syndrome via various dtac's communications channels to employees</li> </ul>
	Physical Injuries	<ul style="list-style-type: none"> <li>• Monthly safety inspection at high-risk locations in the workplace by the HSSE Department to ensure effective safety and protection measures</li> <li>• Regular performance examination of mechanical tools and machines utilized by dtac employees and outsourced staff</li> <li>• Initiate and execute the 'Workplace Cleaning Season for Life' to encourage employees to keep their workspace clean and organized at all times</li> </ul>
	Workplace Environment	<ul style="list-style-type: none"> <li>• Ensure safe workplace environment, e.g. lighting, noise, air and water, in good standard as required by law</li> </ul>
	Wellbeing	<ul style="list-style-type: none"> <li>• Ensure high quality drinking water by benchmarking Department of Health's standard annually</li> <li>• Internal campaigns for exercise and balanced diet</li> <li>• Disease and epidemic surveillance and preventive measures enforcement</li> </ul>

Employees (by Workplace Types)	Health and Injury Risks	Health and Injury Risk Mitigation Initiatives
Employees at Call Centers	Hearing Ability	<ul style="list-style-type: none"> <li>• Provide regular hearing check-ups and use the results to design effective healthcare and skills training</li> </ul>
	Health Risks	<ul style="list-style-type: none"> <li>• When a case of influenza is found, cleaning and disinfectant spray will be conducted throughout the entire facility</li> </ul>
Exchange Location and On-Site Base Station Technicians	Risks of Direct Contact with High-Voltage Electrical System	<ul style="list-style-type: none"> <li>• Provide knowledge and hands-on skills training in on-site safety, how to perform self-projection properly, and emergency first aid procedures when working with high-voltage electrical systems</li> </ul>
Employees primarily using vehicles for work purposes, e.g. salespersons and maintenance technicians	Road accidents	<ul style="list-style-type: none"> <li>• Organize exhibitions to promote awareness and actions in road safety measures</li> <li>• Create a VDO clip about road safety shared through dtac's internal communication channels</li> <li>• Provide regular road safety training for target employees, e.g. chauffeurs and salespersons</li> <li>• Create and give away posters and reminding stickers on road safety and proper vehicle operations, such as putting on seatbelt before taking off</li> </ul>
Employees at Warehouses	Forklift Operation Risks	<ul style="list-style-type: none"> <li>• Provide regular training on forklift operations with safety measures to all forklift operations staff</li> </ul>

In 2017, dtac found no incidents from workplace and environment as a result of effective HSSE initiatives and actions. (G4-LA6)

Incidents	Incident Rate
Injury Rate	0
Occupational Disease Rate	0
Lost Day Rate	0
Absentee Rate	0
Number of Deaths due to Work	0
Accident Frequency Rate	0
Accident Severity Rate	0

# About this report



Total Access Communication Public Company Limited (dtac) has conducted a Sustainability Report of 2017 in accordance with Global Reporting Initiative (GRI) with G4 for the second consecutive year in order to reveal our performance and the significant results of our sustainability efforts, including communicating our achievement on sustainability to the stakeholders. The data of this report covers the

operation results dated from January 1, 2017 to December 31, 2017. Its contents are in accordance with Core Criteria and related to the 17 Sustainable Development Goals (SDGs), particularly SDG # 10 Reduced Inequalities.

## Scope of the Report

The 2016 Sustainability Report particularly reveals only dtac's performance, without the other companies in its group. However, dtac will try to improve data collecting in order to collect and reveal the complete and inclusive data of those companies in the future.

## Principles for Theme Selection and Scope of Impact



### 1. Identification

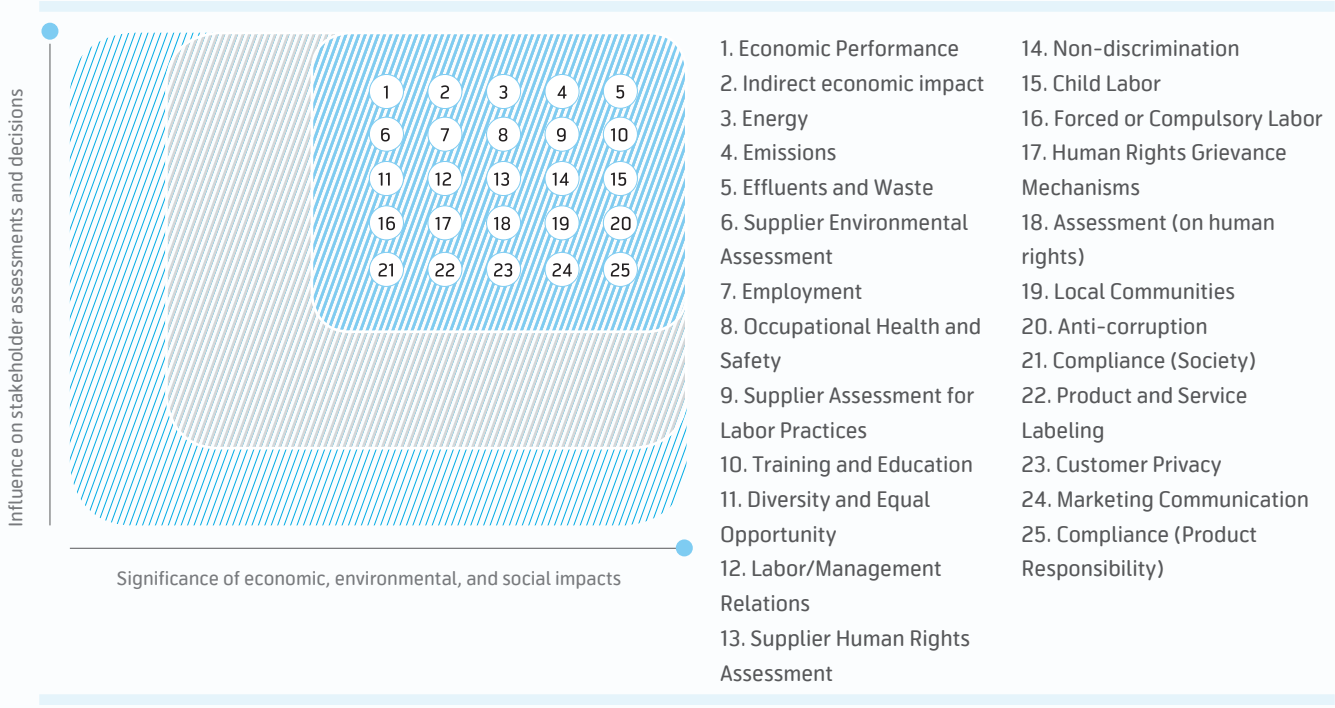
Initially, dtac selected some issues that are related to sustainability, covering economic, social, and environmental aspects from the international criteria involving with telecommunication business and the operation of leading telecommunication companies. Then, we organized a workshop to consult with the executive's representatives and the related agencies in order to select the issues that are consistent with the protection of the stakeholders and the sustainability context.



### 2. Prioritization

dtac organized a workshop with the executive representatives with the objective of selecting the major issues by consideration of two points of view: the influence on the stakeholders' assessment and decision making; and the significance of economic, environmental and social impacts of the organization. The results of the consideration reveal the major issues as follow:





### 3. Validation

The important issues were validated by the representatives of dtac’s executives before approving the selected issues. We then considered the many aspects of these issues in terms of economics, society and environment, including their consistency with dtac’s sustainability missions.



### 4. Review

The report was reviewed by the stakeholders in the organization, such as sustainability team, related agencies and board representatives. The suggestions given by these stakeholders were applied for the improvement of the report of the next year.

In addition, the sustainability report of 2017 was submitted to the stakeholders outside the organization, such as mass media, NGO, and was presented on a website, [http://dtac-th.listedcompany.com/sd\\_report.html](http://dtac-th.listedcompany.com/sd_report.html) as a channel for communicating our guidelines and achievements of the sustainability missions to the stakeholders and the other people.



### 5. Contact

For more information or suggestions, please contact

Email : [sustainabilitydept@dtac.co.th](mailto:sustainabilitydept@dtac.co.th)

Tel : 02 2028000

or Sustainability Department, Total Access Communication Public Company Limited,  
319, 41st floor, Chamchuri Square, Phayathai Road, Pathumwan, Bangkok, 10330

# Assessment Results of Significant Issues and Scope of the Report

Operation Results	Sustainability Issues According to GRI (G4-19)	Scope of the Impacts							
		Internal (G4-20)	External (G4-21)						
			Shareholders and Investors	Staffs	Communities and Society	Partners	Customers	Creditors	Government Agencies
<b>Economics</b>									
Economics	Economic results	✓							
	Indirect economic impact	✓			✓				
<b>Environment</b>									
Environment	Energy	✓							
	Wastewater and sewage	✓							
	Air pollution	✓							
	Partner assessment on environment	✓							
<b>Society</b>									
Labor and valuable labor treatment	Employment	✓							
	Labor / Labor Relations Management	✓							
	Occupational safety and health	✓							
	Training and education	✓							
	Diversity and equity	✓							
	Partner assessment on labor practices	✓							
Human rights	Non-discrimination	✓				✓			
	Child labor	✓							
	Statute labor / Forced labor	✓							
	Assessmen	✓				✓			
	Partner assessment on human rights	✓							
	Mechanism for human rights complaints	✓							
Society	Local communities	✓							
	Corruption resistance	✓				✓			
	Law abidance (in social context)	✓			✓				
Product responsibility	Labels of products and services	✓				✓			
	Customer privacy	✓							
	Marketing communication	✓					✓		
	Law abidance (Product responsibility)	✓						✓	
		✓						✓	
		✓						✓	
		✓						✓	

# Connection between the Operation and 17 Sustainable Development Goals (SDGs)

Sustainability	Indicators	Sustainable Development Goals (SDGs)
Economic results	EC1 EC2 EC3	     
Indirect economic impacts	EC7 EC8	        
Energy	EN3 EN5 EN6	   
Wastewater and sewage	EN23 EN24 EN25	  
Air pollution	EN15 EN16 EN17 EN18 EN19	   

Sustainability	Indicators	Sustainable Development Goals (SDGs)
Employment	LA1	 
	LA2	
	LA3	
Labor / Labor Relations Management	LA4	
	LA5	 
LA6		
LA7		
LA8		
Training and education	LA9	  
	LA10	
	LA11	
Diversity and equity	LA12	 
Partner assessment on labor practices	LA14	  
	LA15	
Non-discrimination	HR3	  
Child labor	HR3	 
Statute labor / Forced labor	HR6	

Sustainability	Indicators	Sustainable Development Goals (SDGs)
Mechanism for human rights complaints	HR12	
Local communities	S01 S02	 
Corruption resistance	S03 S04 S05	
Law abidance (in social context)	S08	
Labels of products and services	PR3 PR4 PR5	 
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