SAMSUNG

Whitepaper

Smooth times. Form and Function:

The Australian market perspective on rugged handheld devices

Introduction & Executive Summary

For too long rugged handheld devices were seen as the clunky, heavy, specialised tech handhelds for use in especially arduous environments. Expensive, relatively heavy and not exactly aesthetically pleasing, these devices however excelled in harsh workplace situations.

These devices still have a place but we work differently now.

We're more mobile, work from multiple locations, expect customer service employees (regardless of role) to have information literally at their fingertips, instantly available. As the boundaries of our workplaces have extended so too has the need to have continuous connectivity that is secure, integrated into our workflows, applications and data, and available all day.

At the same time, the consumerisation of IT (CoIT) and a pervasive bring your own tech (BYOT) culture have seen employees develop a stronger focus on device aesthetics, trends and easy to use mobile devices in a work setting.

In this context, commissioned by Samsung Australia, this report provides a research-based perspective on the adoption and use of rugged mobile devices by Australian businesses. It provides insights into how Australian firms are using these devices to support a growing range of business solutions traversing terrain as varied as customer service, health, and financial services through to logistics and mining.

With data drawn from over 800 Australian businesses, the report highlights:

New Industries

The 'traditional' markets for rugged devices are now joined by emerging markets such as banking and professional services and usage is expanding beyond 'hard-core' environments to encompass more moderate scenarios that aren't addressed by simply 'wrapping a case' around a standard consumer device.

4-in-10

Businesses surveyed now use rugged mobile devices.

35%

Productivity gain

+50%

Device usage life

-25%

Cost reduction

New features

The top desired features have moved from the standard MIL-spec to long battery life, multiple connectivity options (wifi+mobile+NFC+sensors) and data security (including biometrics)/data governance capabilities.

This report addresses the key questions of

Which industries are using rugged devices?

What are the key use cases?

What are the new 'must haves' for rugged devices?

What are the benefits of rugged devices?

To finish we have provided a short checklist that provides steps to support the creation of your company's rugged devices strategy.

Which industries are using rugged devices?

4-in-10 of our survey respondents stated they use rugged handheld devices in their operations.

The list of industries deploying rugged devices has one or two interesting inclusions. In the past, it would have been clustered mostly around large organisations (500+ employees) and mostly in key industries (such as mining, logistics, health and utilities).

Now, there is an emerging categorisation of sectors that can be thought of as the more traditional users of rugged devices – mining, utilities, construction, healthcare, etc – and the emerging sectors that are adopting these devices as their workforce activities evolve, such as BFSI, professional services, front-end retail and entertainment. This 'new' group reflects a number of factors, in part the greater mobilisation of workforces with a need for anytime/anywhere secure connectivity, stronger focus on customer service and engagement as well as an ongoing focus on operational efficiency.

The top five markets that are adopting rugged devices are:

1. **Mining (Traditional)**

2. **Utilities (Traditional)**

3. **Construction (Traditional)**

4. **Banking & Financial Services (BFSI) (Emerging)**

5. **Manufacturing (Traditional)**

However, stretch the top 5 category just a little further and the next industries are:

6. **Professional Services (Emerging)**

7. **Logistics (Traditional)**

8. **Retail (Emerging)**

What are the key use cases for rugged devices?

The data draws attention to a number of clearly identified use cases for rugged handheld devices, with the top 5 being:

1   **Field service**

2   **Customer service and engagement**

3   **Data capture**

4   **Warehousing**

5   **Financial transactions and services**

Where it becomes a little more interesting however is exploring the top use cases within sectors. The following graphic illustrates the top 5 industries deploying rugged devices and the key business operations supported:
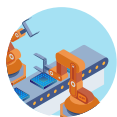
Manufacturing

Logistics/transport
Warehousing
Data capture
Asset management
Customer service

BFSI

Finance service
Customer service
Mobile customer engagement
Data capture
Asset management

Construction

Field service
Warehousing
Asset management
Customer service
Logistics/transport

Utilities

Logistics/transport
Data capture
Asset management
Field service
Customer service

Mining

Field service
Data capture
Logistics/transport
Customer service
Warehousing

> "Initially we were only thinking about a couple of specific uses but now we're rethinking that to look at where else we can deploy devices to support more than just our field service teams. Our modelling suggests that we'll get better device life and reduced maintenance costs (think standard smart devices) so it makes sense for us to look at where we can use them more."
>
> End-User Computing Lead, State Utility group.

During the research we found example use cases including:

- A state-wide taxi organisation deploying android-OS rugged tablet devices that provides drivers with routing, booking and customer information that delivered multiple benefits including higher customer satisfaction metrics and lower costs due to better integration into operational systems and longer device life

- An airline organisation deploying rugged smart devices with inbuilt payment and security capabilities to allow cabin crew to securely process customers' inflight purchases.

- A national banking and financial services group trialling the use of rugged smart devices for branch personnel to create a highly mobilised 'branch of the future' focused on more efficient and effective customer service and engagement.

- A retail group trialling rugged smart phones with customer service staff integrated with warehouse operations to provide real-time information on stock items. The same devices are also offering secure mobile payments capabilities and integration with CRM systems to enhance the customer experience. Benefits range from ease of training staff (due to familiarity with the phone form factor), improved stock management and increased customer service satisfaction.

- An international logistics group deploying rugged tablets to fleet drivers and managers incorporating a telematics and management solution. A paperless system the devices support a range of operations including vehicle safety inspections, driver monitoring and safety, routing and vehicle maintenance.
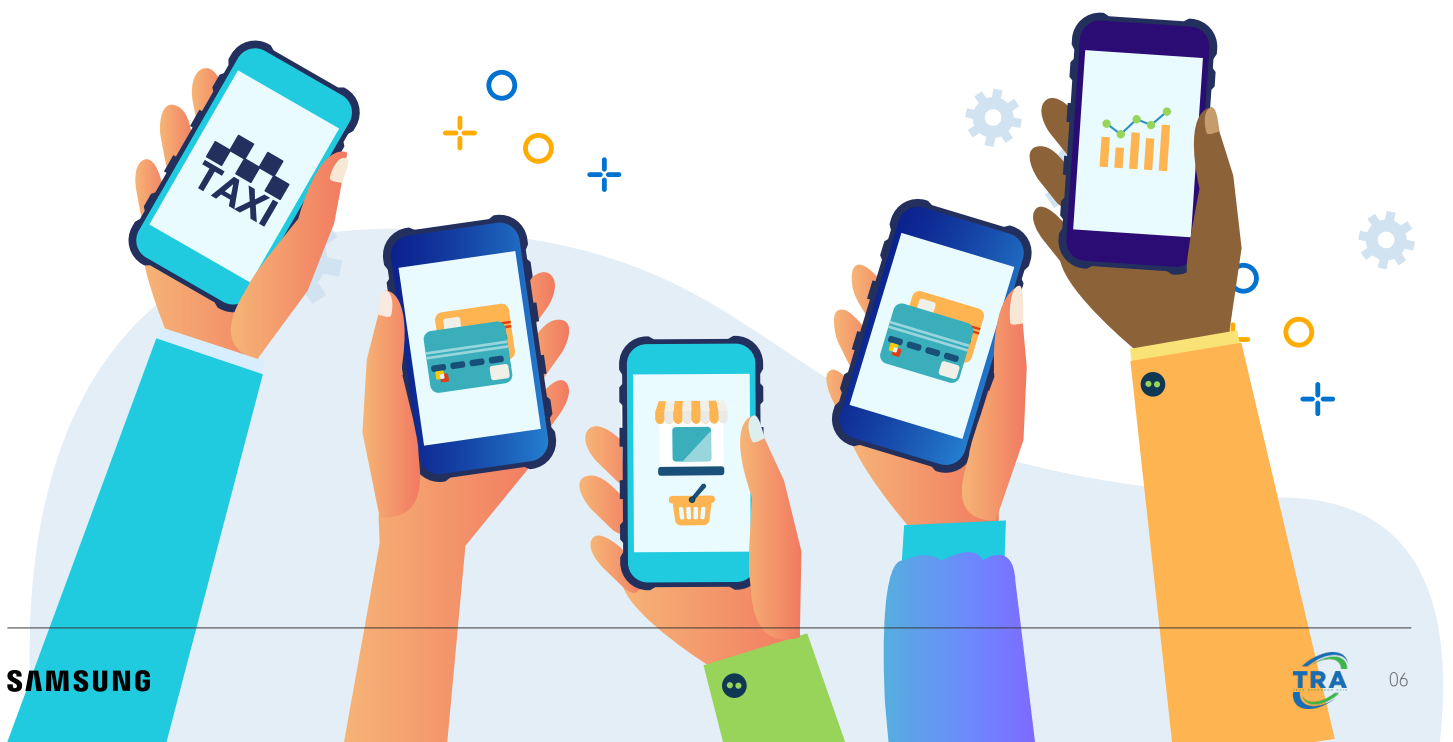
What are the new 'must haves' for rugged devices?

Obviously the sector needs dictate use cases and organisations told us that they undertake extensive profiling of employee roles and functional requirements before matching these to an appropriately rugged device.

Prior to undertaking the research the conventional wisdom was that factors such as MIL-STD and IP ratings were the supreme arbiters of rugged suitability. These, coupled with the availability of peripherals such as add-on cases or input devices, essentially were the factors that determined the suitable 'ruggedness' of the device match to the employee requirements.

Now, the new data suggests that whilst these factors are still important they have been surpassed by other requirements that reflect the evolution of the rugged device into the hands of more employees in more sectors and in different scenarios. The top 5 most important aspects now sought by organisations are identified as:

Another factor playing on the minds of business users relates to the end of life of Windows Mobile (or even Windows CE), a common operating system for many older rugged devices. Research data suggests this is an important factor for the 71% of businesses that intend to refresh their rugged device fleet in the coming 12 months, with Android OS being the preferred operating system.

The data also highlighted issues with legacy rugged devices being difficult to integrate deeply into business systems in a way that provides good customisation, flexibility and security. With rugged devices being deployed in increasingly new scenarios with a broader number of employees, ease of integration, customisation and security have all emerged as critical issues for consideration for many businesses.

1. Battery life

2. Multiple connectivity options (GSM, Wifi, NFC, sensors, etc)

3. Device / data security and management

4. Device size and form factor

5. Inbuilt device storage

"With us pushing these (rugged devices) into more areas to support our customers we just can't afford, literally, to have a security breach or data loss. We have to make sure we can manage the security environment of the device and the data on it."

Customer Service Director, mid-sized Australian Retail Group.

What are the benefits of rugged devices?

The survey data highlights a number of key outcomes and benefits for those organisations that are using rugged handheld devices.

Across all sectors the top advantages include:

+ 35%

Up to 35% improvement in employee productivity

+ 30-50%

Significant improvements in device longevity and total costs of ownership by 30-50%

– 25%

Reduction in device maintenance and repair costs of up to 25%

+31%

Through better integrated workflows and data management, improvements of up to 31% in data capture and information access

Traditional		
MINING	LOGISTICS	UTILITIES
Device life / TCO	Device life / TCO	Data capture
Customer service	Data capture	Employee safety
Employee safety	Employee productivity	Employee productivity
Data capture	Customer service	Device life / TCO
Information access	Employee safety	Information access

Emerging		
BFSI	PROFESSIONAL SERVICES	HEALTH
Device life / TCO	Information access	Customer (patient) service
Information access	Device life / TCO	Device longevity
Data capture	Employee productivity	Employee productivity
Customer service	Customer service	Information access
Employee productivity	Data capture	Employee safety

Closing comments

Today's rugged devices are sleeker than their legacy predecessors, offer greater customisation options on open platforms, and combine robust security capabilities with enhanced connectivity options in a more consumer friendly form factor.

It is unsurprising therefore that the research data reveals organisations are expanding the usage of rugged devices outside of the 'traditional' industries and use cases to 'new' sectors such as BFSI and professional services.

Regardless of the sector, benefits are clear; the data revealing improvements in customer satisfaction, lower total cost of ownership, productivity improvements and better access to data and information in real-time.

For organisations contemplating the deployment of rugged devices to support their business operations, we have included a short checklist of issues to start you on your way.

Customer Satisfaction

+ 27%

of respondents experienced an increase in customer satisfaction

Productivity

Up to a 35%

improvement in workforce productivity

TCO

Between

30-50%

longer device life and a 25% reduction in device maintenance/service costs

Information Access

31%

of respondents experienced an improvement in access to data and information in real-time.

Rugged device considerations and checklist

TRA offers the following considerations as your organisation contemplates its rugged device strategy. They are not intended to be exhaustively comprehensive or act as a silver bullet. Every organisation is different and these considerations should not replace proper due diligence. However, we trust they stimulate new thinking for informing your approach and strategy

1 Employee profiling

Do your considerations incorporate role-base profiling for employees and how will employee roles change in the future? What critical business initiatives are coming in the next 1 year, 2 years, 3 years that will influence how, where and with what your employees perform their jobs?

2 As roles change, so too do vendors

The data suggests traditional rugged device vendors such as Honeywell, Panasonic and Motorola are no longer top of mind amongst businesses considering rugged devices. The baton has passed to vendors with a more expansive range that blends performance, aesthetics and security integration with consumer friendly usage. The top three vendors identified in the research are now (#1) Samsung, (#2) DELL Technologies and (#3) Lenovo. Does your device strategy include these organisations or are you sticking to traditional players only?

3 Baseline measurement for metrics.

Do you plan to benchmark performance post device deployment? You should. What baseline metrics do you currently have or need for comparative purposes?

4 Connectivity options

What is your current network and broader connectivity need? How will this change in future? What allowance or consideration has been given to incorporating other connectivity services such as beacons, sensors, NFC and fixed wireless access such as 5G.

5 Degree of customisation needed, integration and proprietary platforms.

These three issues were identified in the research as the most common problems that negatively impact rugged device deployments. Make sure you assess vendors' stance on open platforms, availability of SDKs and partner ecosystems/experience with off the shelf solutions.

6 Security capabilities.

What level of security is available to users? Hardware? Software? How important is biometric security capability for your workforce? Does the security capability extend across all aspects of device, application and data management?

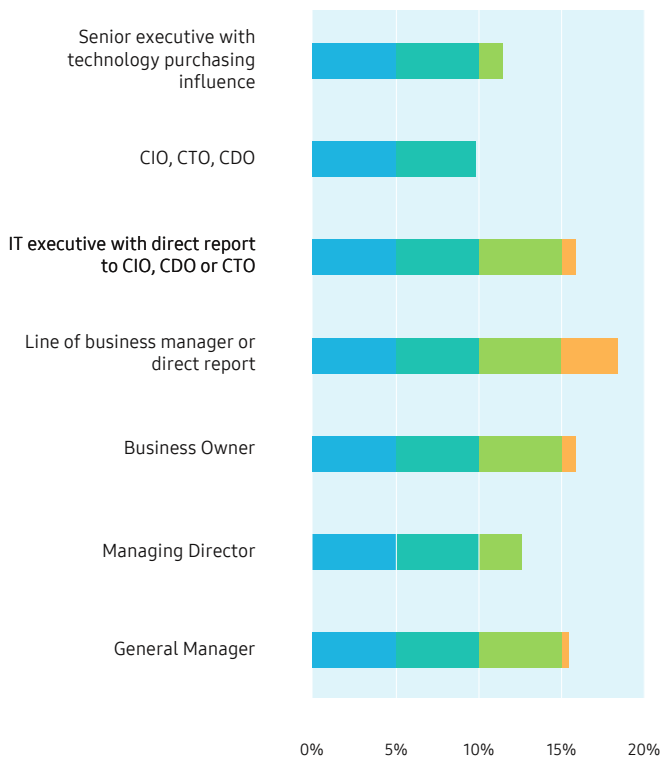# Research methodology and demographics

TRA undertook a blended research methodology that encompassed:

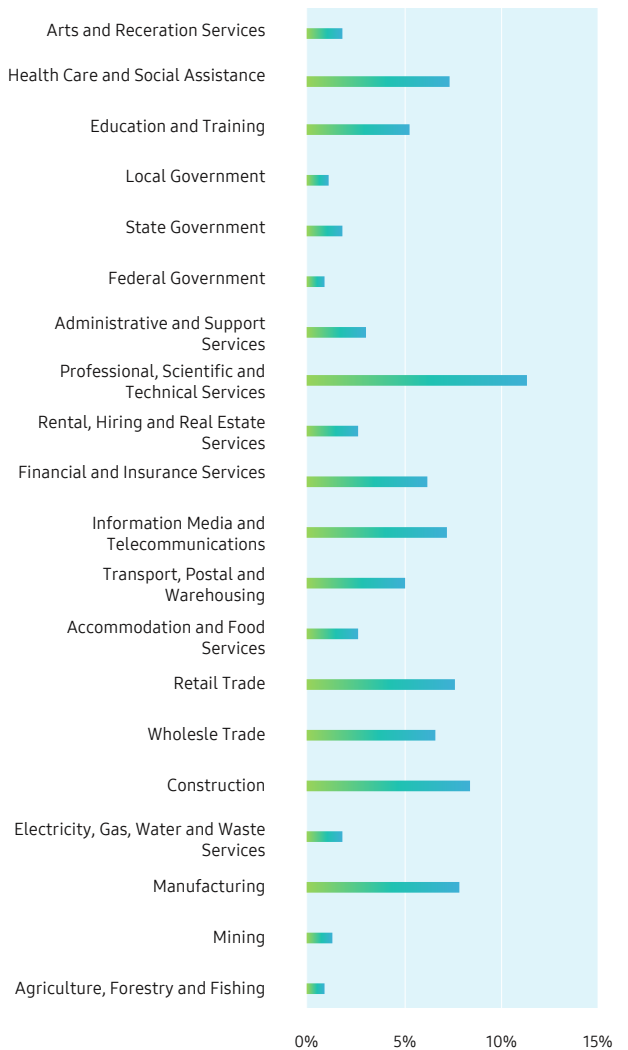A quantitative survey of 813 IT and Line of Business decision markets in Australian organisations

RESPONDENTS BY COMPANY SIZE
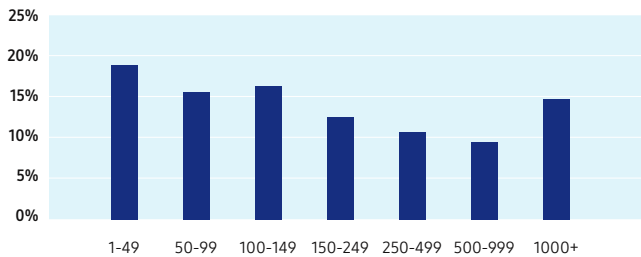
RESPONDENTS BY ROLE

RESPONDENTS BY VERTICAL

Total survey size, n = 813
Conducted May 2019

In addition we interviewed CXO-level representatives from 25 Australian and international organisations to understand their view of 5G, goals, business focus and activities.

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