5G

STARTER FUND
ENTRY KIT

Backing the next generation of innovators and history makers.

![Spark 5G logo]

Contents

What is the 5G Starter Fund?

Spark is on a nationwide search to find New Zealand's most innovative 5G ideas. We're committed to supporting leading-edge Kiwi businesses in bringing these solutions to life through the 5G Starter Fund.

A minimum requirement to enter is a proof of concept, this could be on paper or a working prototype. Over the four month program you will have support from the Spark 5G team, time in our 5G Co-Lab and funding to develop your idea.

The aim of the 5G Starter Fund is to advance your idea or prototype so you can demonstrate it as an MVP by the end of the program. We understand that businesses will be at different levels with their products and the program is flexible to tailored accordingly.

Spark is looking to fund businesses building new 5G enabled technology in the following categories:

CATEGORY 1

NEXT GEN HEALTH

5G solutions that enable a step forward for the health and wellness of all New Zealander's.

CATEGORY 2

GOOD FOR NEW ZEALAND

5G-enabled solutions that improve the lives of Kiwis or build a more sustainable New Zealand.

CATEGORY 3

INDUSTRY DISRUPTORS

5G-enabled technology that will fundamentally change the way we live, work and play.

CATEGORY 4

IMMERSIVE EXPERIENCES

5G-enabled technology that offers new sensory educational or entertainment experiences.

LET'S SEE WHAT THIS THING CAN DO

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CATEGORY 1

NEXT GEN
HEALTH

5G solutions that enable a step forward for the health and wellness of all New Zealander's.

Ideas/thought starters:

Paramedics could make lifesaving diagnoses more quickly at the point of care in their ambulances or patient homes.

New Zealanders are cared for in their homes with real time monitoring supported by their healthcare team.

Haptic gloves and responsive technology could help health students across the country receive high quality training leveraging new technologies like VR.

New Zealanders in isolated parts of New Zealand receive robotic lifesaving surgery from leading surgeons across the country.

For more idea thought starters check out our category articles at **spark.co.nz/5gstarterfund**

![Spark 5G logo]

CATEGORY 2

GOOD FOR
NEW ZEALAND

5G-enabled solutions that improve the lives of Kiwis or build a more sustainable New Zealand.

Ideas/thought starters:

Autonomous medical drones to deliver emergency supplies like insulin or defibrillators directly to patients.

5G-powered IoT sensors that help optimise irrigation and soil nutrition and reduce water use.

Water quality sensors with an AI overlay to identify patterns in river conditions real time and measure the impact of conservation efforts.

5G enabled rescue drones could determine the behaviour of swimmers in the water and identify those in danger of drowning.

For more idea thought starters check out our category articles at **spark.co.nz/5gstarterfund**

CATEGORY 3

INDUSTRY
DISRUPTORS

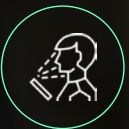5G-enabled technology that will fundamentally change the way that we live, work and play.

Ideas/thought starters:

A new robotics solution to automate complex manufacturing.

Low cost, real time smart grids to support energy management and reduce consumption.

Near instant facial recognition technology to manage entry into concerts and stadiums.

Always-on low power health monitoring devices which send data back to health professionals and uses an AI algorithm for early risk detection.

For more idea thought starters check out our category articles at **spark.co.nz/5gstarterfund**

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CATEGORY 4

IMMERSIVE EXPERIENCES

5G-enabled technology that offer new sensory educational or entertainment experiences.

Ideas/thought starters:

Creating a real-time interactive basketball game in VR.

Using immersive VR and haptic feedback gloves to help train doctors for surgery.

Augmented reality concerts and event experiences where you can interact with friends, virtually and in person.

Mixed reality glasses allowing engineers to share and edit 3D engineering models in real time to support design or remote maintenance.

For more idea thought starters check out our category articles at **spark.co.nz/5gstarterfund**

The Process

Round One

The initial applications will be judged by a Spark Panel. If you are a shortlisted applicant you will be required to:

Prepare a video giving an overview of your product, the problem it solves, why 5G will enhance it and a brief introduction about your business. Video must be no more than three minutes. You will then need to take part in a VC call with the Spark panel where you will be interviewed. You should expect business, product and tech questions. Full details will be given to shortlisted businesses.

Round Two

Finals round. We will announce our finals judging panel during the application period.

Up to eight finalists will be required to pitch in person to our finals panel, in Auckland. Details will be provided on this day if you are a finalist. There will also be a day boot camp prior to finals round, to help you prepare.

Entry requirements

- Applications must be made by a New Zealand registered business or charity
- All members of your team are 18 years or older
- Agree to a police background check
- Your business is not a current Spark vendor or partner
- If you are selected as a finalist, you must be available for one day to attend a finalist bootcamp during the w/c 21 September 2020 (In person or VC)
- If you are selected as a finalist, you must be available for one day to attend a panel interview during the w/c 19 October 2020 (In person or VC - if air travel is not available)

Please view our Terms and Conditions page for full details.

Timings

Re-Launch & Announcement

27 MAY

Application Period

27 MAY - 16 AUGUST

Finalists Announced

16 SEPT

Judging

w/c 19 OCT

Winners Announced

w/c 26 OCT

Funding & 5G Co-Lab Testing

NOV 20 – FEB 21

5G is next generation networking

The main difference between 5G and the existing 3G and 4G networks is that it combines massive data bandwidth and speed with incredibly fast response times. To achieve this, the 5G network distributes its nodes closer to the customer, building a distributed network architecture rather than a centralised one. This processing power, enabled by edge computing, will give businesses the opportunity to innovate with real-time applications and automation.

How the game will change

5G has five key properties that can open up this new world of possibilities.

Faster

Today we live in a world of Ultra-fast Broadband Fibre (UFB) networks, with speeds up to 1 Gbps. With 5G, using high frequencies of large bandwidths, we can expect speeds of up to 3 Gbps – and in some instances 10 Gbps or more. These super-fast speeds, combined with greater bandwidth capacity, will offer businesses a far more robust and reliable way to process large amounts of data in real-time. As a result we'll see an extensive transformation of manufacturing and customer experiences.

Low Latency

5G has the potential to dramatically improve latency, from today's typical 20–40 ms down to less than 10.5 ms – and potentially even down to 1 ms. Latency is the delay that occurs when transmitting digital data between the device and the network. Low latency is key to enabling mass uptake of augmented reality (AR) and virtual reality (VR) technologies and overcome the motion sickness users might experience. It also increases opportunities for mission-critical industrial applications that need immediate response times to situations.

Edge computing

Another term you'll see frequently used is edge computing. This advancement is made possible by reconfiguring networks. Functions requiring vast amounts of processing power can happen closer to cell sites. With the increased bandwidth and lower latency that comes with 5G, there's no need for data to be moved across the entire country. Instead, it takes place at the "edges" of the network, which means it can happen locally.

Network slicing

Network slicing is a key feature of 5G – a form of built-in prioritisation. It's a solution that can allow hundreds or even thousands of devices with differing performance requirements to be connected within close proximity. For instance, an autonomous vehicle has more real-time needs than a smart parking sensor. Network slicing accommodates these different needs by tailoring the networks according to the service's performance requirements and moving the functions closer to the customer. Think of it like assigning the data to various highways, roads, and service lanes, so they can all get to their destination independent of each other.

Mass connectivity

In the realm of the IoT, more "things" are connecting to digital networks every day – from fridges and e-scooters to farm gates and streetlights. While today's networks have limits on the number of simultaneous connections, 5G technology has been designed to support connected device densities of up to 1 million devices per square kilometre on a continual basis. Such a huge leap in scale is bound to have an enormous impact on how we connect and interact with everyone and everything.

The Prizes

Up to four businesses will win:
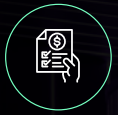
Prize Money: $625k in Funding

1st prize $250k for winning business

3x 2nd place prize $125K per business

Mentoring and support

Up to eight businesses will make it through to our final round. All businesses will have the opportunity to attend a day long boot camp to help prepare them for the finals. There will also be a winners boot camp to kick start the development of their technology and testing in the 5G Co-Lab. Winning businesses will have the opportunity to have one-on-one mentoring with an industry leader. This will occur over a period of three months (one session per month). They'll also receive regular check-ins and support from the Spark 5G Starter Fund team.

Access to Spark 5G Co-lab and tech support

Winners will be invited to spend time in our Spark 5G Co-lab in Auckland to test their product on the network. Dates and times in the 5G Co-Lab will be organised with the Programme Manager. They will have access to the latest technology and equipment to test and build on the 5G network, as well as Spark 5G tech support.

Potential opportunity for Spark investment or partnership

We're really excited to see what 5G enabled solutions you will develop through this programme. We will look to discuss any opportunities there may be for us to work together in the future; whether it be through investment, a partnership or helping you find customers.

Application Questions

To apply, complete and **submit the application online.**

If you have questions about the application process, contact us at **5gstarterfund@spark.co.nz**

Your Details

- Business name
- Registered company name
- Business address
- Contact details
- Website
- Socials (LinkedIn, Facebook, Twitter, etc.)
- Describe your business in a short elevator-style pitch
- Share a YouTube or Vimeo link of how your product or prototype works

  Please note that a demonstratable prototype will be required if your business is selected for the final round of judging – see entry requirements.

Your Idea

The Spark 5G Starter Fund focuses on four key pillars: Next Gen Heath, Industry Disruptors, Immersive Experiences and Good for New Zealand. How does your business or technology best align to these pillars?

- **Next Gen Health**
- **Industry Disruptors**
- **Immersive Experiences**
- **Good for New Zealand**

- Tell us how your technology, product, application or service works
- Talk us through the problem your product, service or technology solves
- Tell us about your ideal customer, user or market
- What stage of development is your technology, product, application or service is at?
- Tell us how 5G and the key properties (Faster speeds, Low latency, Edge computing, Mass connectivity and Network slicing) will be a game-changer for your business
- Do you own any unique IP?

Additional questions for Next Gen Health ONLY

- How does your idea improve health outcomes? How do you plan on measuring the health benefits?
- What are the critical success factor for the adoption of your idea to improve health for all New Zealanders?
- How do you intend to work with health customers to deliver your 5G solution?

Application Questions

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Fit for 5G fund

- Please tell us how big the 5G market opportunity could be for your business? For example, market size, growth rates, projected revenue

- Please outline how you would utilise any proceeds from the 5G fund for your business or project?

- What would you do in our Spark 5G co-lab space?

- What areas of support would you require from a mentor?

- What additional support and assistance from Spark NZ would you hope to get as part of the 5G Starter Fund?

Your Team/Business

- Tell us a brief history of your business, how did it start?

- Tell us about you and your key team members (What roles they play & their previous experience?)

- Has the team/business participated in an accelerator or received funding/investment before? *For example, C-Prize, Vodafone Xone*

- What history does the team/business have in similar technology and/or innovation projects?

- Please include referee contacts *Please include at least one character and two business referees*

More info spark.co.nz/5G