

# Tech for Everyone

Building a better future for New Zealand through our technical community

@PrototypeAlex

Hi, I'm Alex Gibson, or @PrototypeAlex on the net

Before I begin, I'd just like to point out that despite the title of this talk, Tech for Everyone, this is a non technical talk.

I'm going to be talking much more broadly than JavaScript, or even our industry.

I'm going to be talking directly about New Zealand, our economy, our society, and our culture.

And how we, as professionals in the tech industry, can work together to make it better.

Not just better for ourselves, but better for everyone.



[Secret Bonus Slide!]

Hi there, glad you've stopped by to read about my ideas about building a better New Zealand, just thought I'd take this time to pitch myself to all you awesome people.

I'm a Software Engineer by trade (technically an Automotive Mechanic by "trade"), but these days I enjoy running teams, coaching developers and building technical culture more than programming.

I'm available for hire around November, and offer range of services, from technical architect, dev manager or even as a full stack developer.

I've got a track record for delivering large scale web applications, and enjoy building companies and products.

Enjoy the talk.

# Aotearoa

New Zealand

First off, lets just take a step back and look at this country of ours.



**4.4 Million**

We're a small country, there's about 4.4 million people living within our shores, and at a glance we appear to be doing OK.

—  
<http://data.worldbank.org/indicator/SP.POP.TOTL?locations=NZ>

# The Good

We've got some good points

# Least corrupt government in the world



We have the least corrupt government in the world, which is amazing.

—  
<http://www.transparency.org.nz/Corruption-Perceptions-Index>

# 2nd in the OECD

For public spending on education

OECD has 35 countries in it

We spend a lot of money on public education compared to other countries, which is also great.

—

<https://national.org.nz/news/2016-09-15-nz-ranked-highly-in-oecd-for-education>

**80% of all households have  
Internet access**



And 80% of all the households in New Zealand have access to the internet.



# The Bad

Then we have the bad points.

# 12th in the OECD

For income inequality

OECD has 35 countries in it

Out of the 35 countries in the OECD, we score 12th for income inequality.

which means that income is distributed unevenly among our population.

This is not great.

—

<http://www.oecd.org/social/inequality.htm>

# 7th in the OECD

For incarceration rate

OECD has 35 countries in it

For every 100,000 people, 202 are serving time in prison, so we're 7th worst in the OECD for our incarceration rate.

Australia have a much lower rate, sitting at only 130 per 100,000

And Japan, have a mere 50 per 100,000 people, in prison.

—

[\[https://en.wikipedia.org/wiki/List\\_of\\_countries\\_by\\_incarceration\\_rate\]](https://en.wikipedia.org/wiki/List_of_countries_by_incarceration_rate)

# Child Poverty

And what I consider to be the most disturbing statistic we have, is our child poverty.



**295,000 Kids**  
**1/4 of all our Children**

Live in income poverty

In New Zealand, 295,000 children live in income poverty.

1/4 of all the children we have in our country are living in poverty.

—

<http://www.nzchildren.co.nz/>



# 90,000 Children

Live in severe income poverty

90,000 of those are living in severe poverty.

These are kids, living in material hardship.

Going without a good pair of shoes.

Not knowing when the next decent family meal will be.

Often having no heating in the family home.

And typically not having lunch for school.

Personally, I think we're in a pretty bad state.

—

<http://www.nzchildren.co.nz/>



But this is politics and tech is neutral right?

*{\_talk\_low\_and\_slow\_}*

But what are we supposed to do?

This is the tech industry and all of that is politics.

“Tech is neutral to politics.”

Is an argument I’ve heard recently.

We aren’t neutral, because we build technology that effects society.

And we shouldn’t be neutral, because we’re in a good position to do something about it.

Sadly, I don’t have a strategy or plan to solve these problems directly.

However, luckily for us, we’ve already been handed a map that shows us the way out of our current situation.



Sir Paul Callaghan, a highly celebrated New Zealand physicist, gave a keynote presentation in 2011, explaining how we can solve the majority of our problems.

That same year, he received the New Zealand of the year award, and then sadly, after a long battle with cancer, he passed away the following year.

Despite this, through the thoughts and ideas he passed on during that keynote his legacy lives on.

The strategy he presented has been heralded by the academic community, and to a lesser extent the government, as a solution to our current economic situation and path towards prosperity.

—  
<https://www.youtube.com/watch?v=OhCAyIInXY>



# **Sustainable economic growth for New Zealand**

An optimistic myth busting approach

Professor Sir Paul Callaghan - 2011 StrategyNZ Keynote

The presentation, called “Sustainable economic growth for New Zealand, an optimistic myth busting approach” presented clear facts about our current economy.

Why certain approaches to government spending, commonly believed by many, can’t and won’t work.

And laid down a single strategy that could make New Zealand prosperous.

# Why Prosperity?

Before I begin explaining Sir Paul's talk, there's one point I'd like to cover.

Why?

Why make New Zealand prosperous?

Why should that be our main goal?

# We need money

To pay for all the things we rely on, day to day

As a country, we need money.

We need money to pay for things like our infrastructure, our roads and public transport systems.

We need money to pay Pharmac, so people can have access to the drugs they need to get better.

The Christchurch rebuild is up to an estimated 40 billion dollars, so we need money to pay for that too.

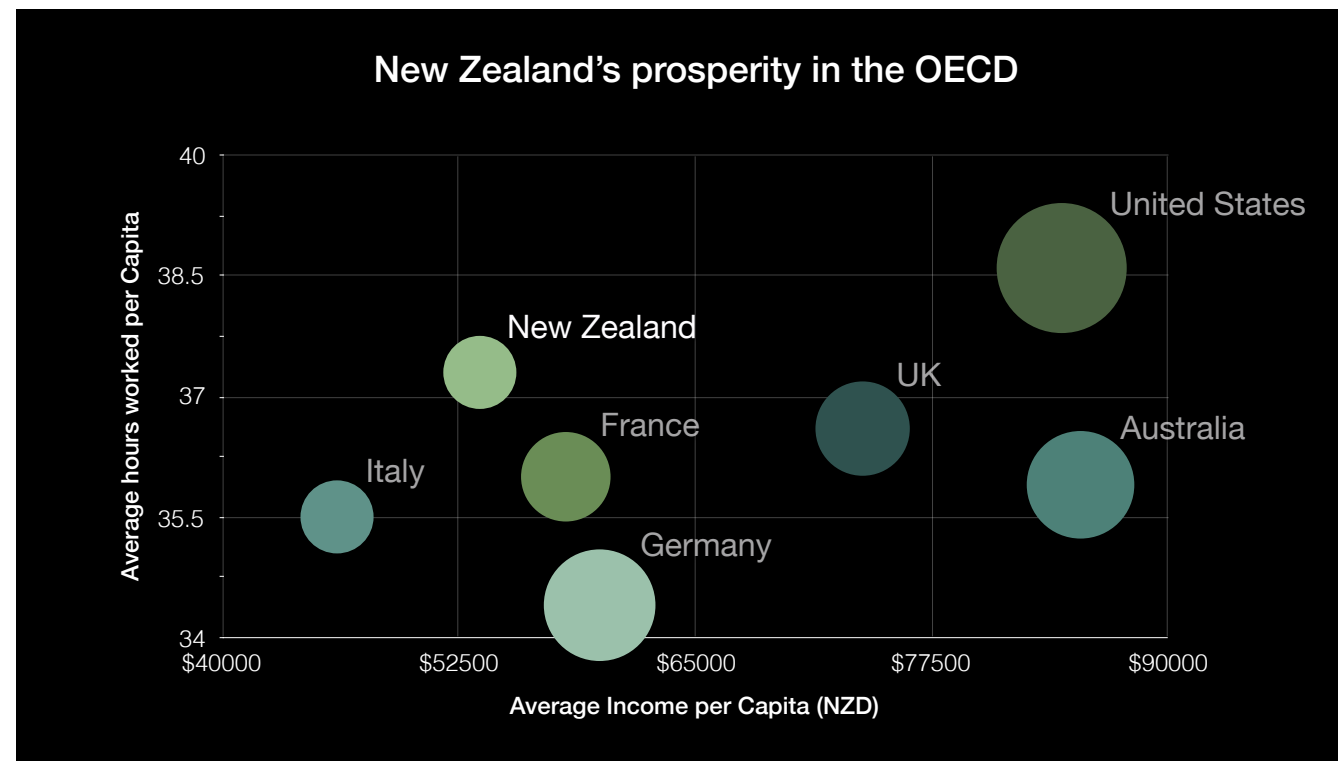
**“In this world nothing can be said to be certain, except death  
and taxes”**

*–Benjamin Franklin*

All these things aren't free, typically the government foot the bill.

So we need to become prosperous.

As a country, we need to make more money, so the government can get more money through taxes, so they can better support us.



Right, Sir Paul's goal was to bust the myths that surround our economy, and here's a simplified graph that will help us explore his ideas.

On the x-axis we have the average annual income per person.

On the y-axis we have the average hours worked per week, per person.

And the size of the bubbles represent each country's GDP per capita

GDP stands for Gross Domestic Product which represents the total dollar value of all goods and services produced over a year.

Our goal here, is to find a strategy that increases our average income per capita and GDP per capita.

So we need to move our bubble to the right and make it bigger.

It would also be nice if we could work less too, like Germany there.

—  
[<http://stats.oecd.org/> - labour force statistics for hours worked]

[<http://www.oecdbetterlifeindex.org/topics/income/> - average income per person]

[<http://stats.oecd.org/> - annual national accounts, main aggregates, GDP]



**100companies.co.nz**

The graph I'm using, and it's underlying models I'll use to alter our economy, were created by Dr Graham Jenson and myself in 2011, in a joint project called 100 companies,

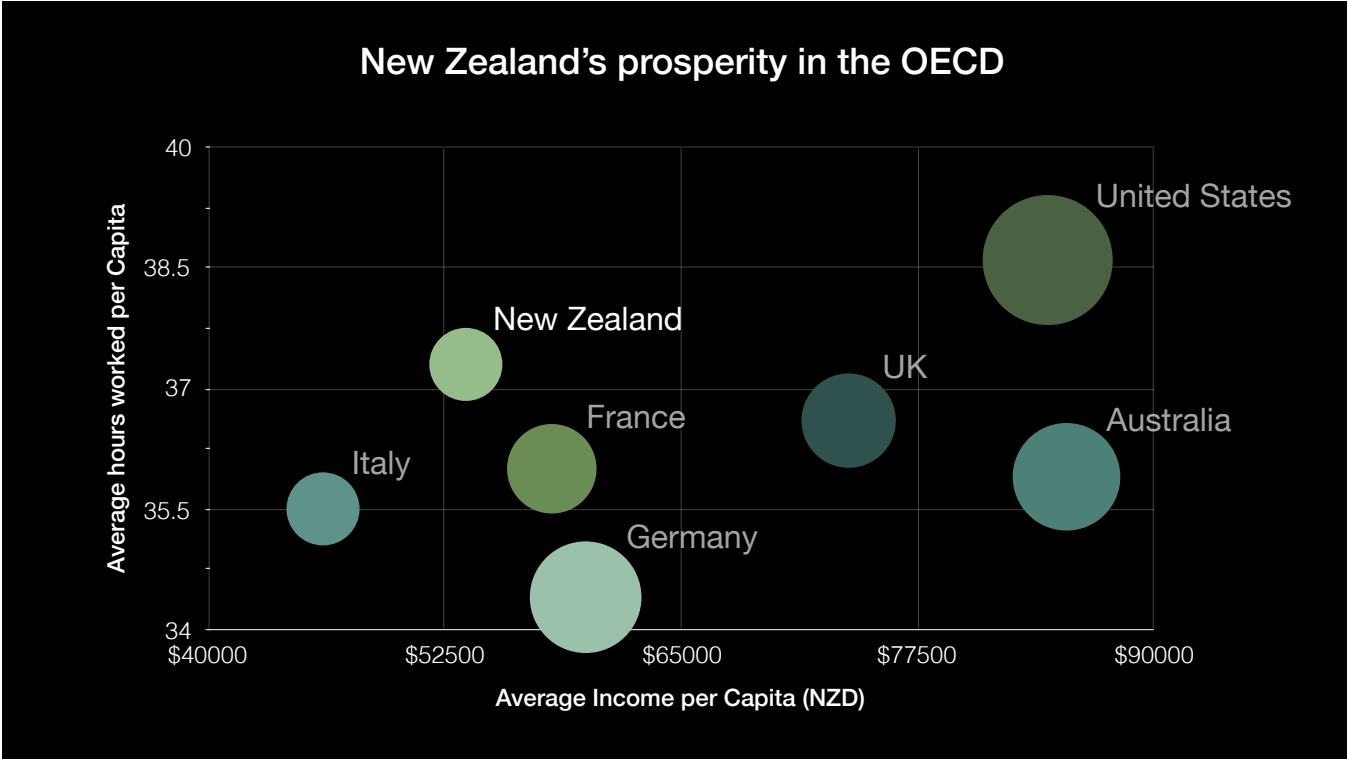
And I've since updated it to reflect 2015 figures.

# Lets invest more in Dairy

Myth #1

So, first myth, we're good at dairy, so why not invest more in farming?

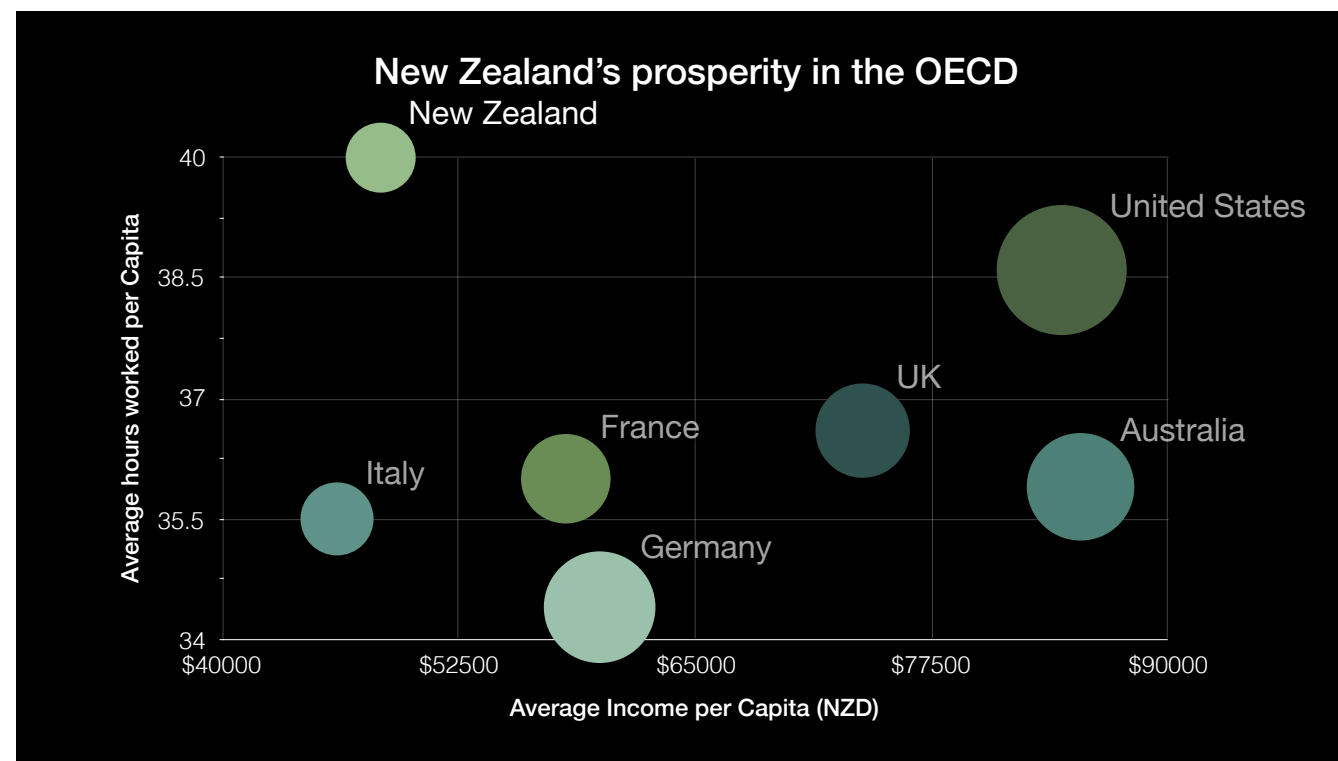
This sounds like a good idea, if you look at the impact our dairy exports make on our economy, it's massive, so why not make it even bigger?



We have around 6 million cows in New Zealand, lets add another 20 million to that.

In doing so, we'll be pushing more of our workforce to work on farms, the net effect of doing so is this.





We've shot up into the top corner, which is the opposite of where we want to be.

So what happened there?

# Farmers work hard

The farming industry's average income is relatively low

First off, our hours worked per week went up, because farmers are very hard workers, that work long hours.

Our average income per capita came down, this is due to the bulk of the farm support workforce earning a mostly lower than average pay.

—

[100companies.co.nz/dairy.html](http://100companies.co.nz/dairy.html)



And lastly, our GDP per capita didn't move much.

Fonterra, our dairy co-operative, is a well oiled machine.

It's fair to say, that unless we get exclusive trade deals into more countries, it's quite hard to get Fonterra performing better than they currently are.

However, Fonterra bring in 7% of our GDP, we'd be in a bad state without our dairy industry, but we can't expect to double it in size any time soon.

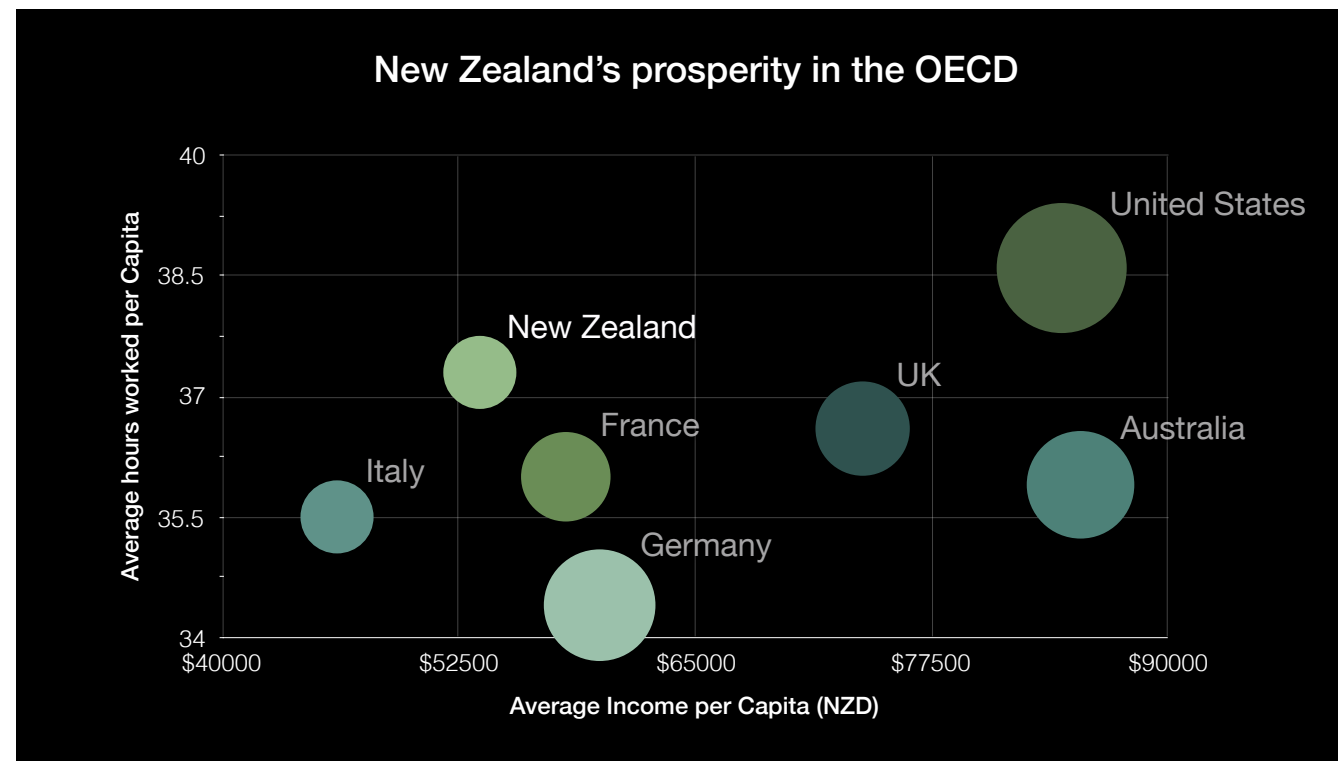
So scaling our agriculture industry is not a path to prosperity

# Lets invest more in Tourism

Myth #2

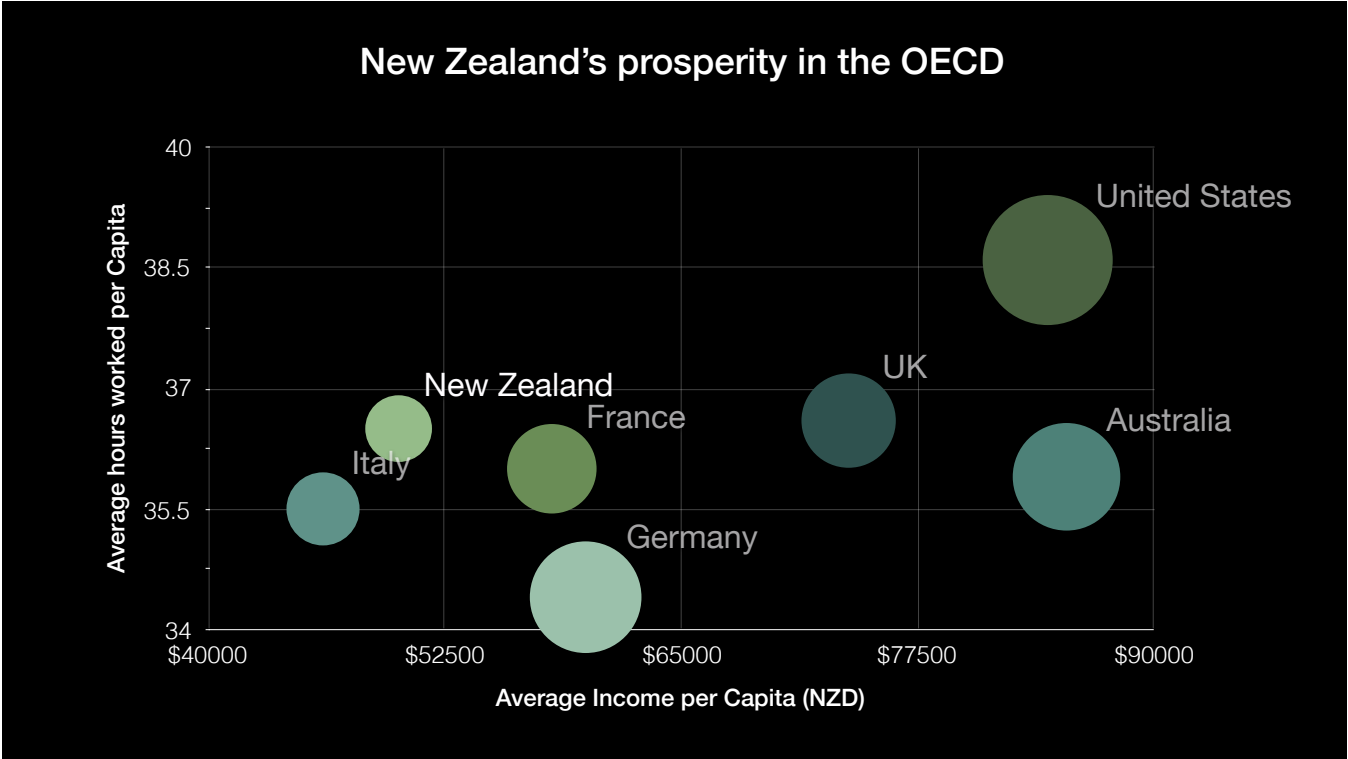
Ok then, dairy is out. That leaves us with Myth number 2, Why don't we invest more in tourism!

And get more people to visit New Zealand.



About 2.5 million tourists visit New Zealand every year, so what happens if we triple that, and increase the visitor count to 7.5 million.

—  
[100companies.co.nz/tourism.html](http://100companies.co.nz/tourism.html) for the models



Not as big a movement as dairy, but we've still gone backwards, so how does that work?

**\$125,000**

Current average revenue per FTE job

NZ Total GDP \$240,000,000  
Available Jobs in NZ\* 1,900,000

$\$240,000,000 / 1,900,000 = \$125,000$

\* stats.govt.nz - Filled Jobs by ANZSIC Group, Sex and Employment

The main problem in scaling tourism is that our GDP per capita shrunk.

And to figure out why, we have to look at how each job in our economy effects our GDP.

Our per capita GDP is about \$51,000 per year  
\$240 billion dollars evenly distributed over 4.4 million people.

However, there are only around 1.9 million jobs in New Zealand.

Which means to maintain our current per capita GDP we need to have each job bring in on average \$125,000 of revenue.

—

Some serious rounding went on here...

\* stats.govt.nz - Filled Jobs by ANZSIC Group, Sex and Employment



**\$80,000**

Average revenue per employee in tourism

Tourism earns about \$80,000 revenue per employee.

So the more people we push into working in the tourism industry, the lower our GDP will go.

—

-> reference from Sir Paul's talk



# Lower than average income

It's tricky to get exact figures on this  
but checkout [www.100companies.co.nz](http://www.100companies.co.nz) for more information

On top of that, the tourism industry also pays a lower than average income.

Which is why we saw that dip in annual average income per capita.

# Lets invest in Mining

Myth #3

That leaves us with our third and final Myth, mining.  
Mining is the future, lets dig up our assets and sell them.

I don't need the graph to disprove this one.

Mining isn't sustainable, pure and simple.



**“We require more minerals”**

*–Zerg Overmind*

It's a one off boost to the economy, but once we're out of resources, it's over.

We need more money, year on year, consistently.

Not just till the wells dry up.

# New Zealand is poor

Because as a country, we choose to be

{\_talk\_low\_and\_slow\_}

So with that, Paul concisely pointed out that New Zealand is poor, because we choose to be.

We've been pulling on the wrong strings, investing in the wrong areas of our economy, and it's making us poorer.

# Let's become prosperous

Lets increase our average income, and our GDP

However, if you recall, to become prosperous, we need to create more jobs that increase our average annual income and GDP.

# 100 top tech companies

Would double our current export  
Adding an additional \$45,000,000,000 a year to our GDP

And you might've guessed it already, but the answer to how do we become prosperous, lies within our tech industry.

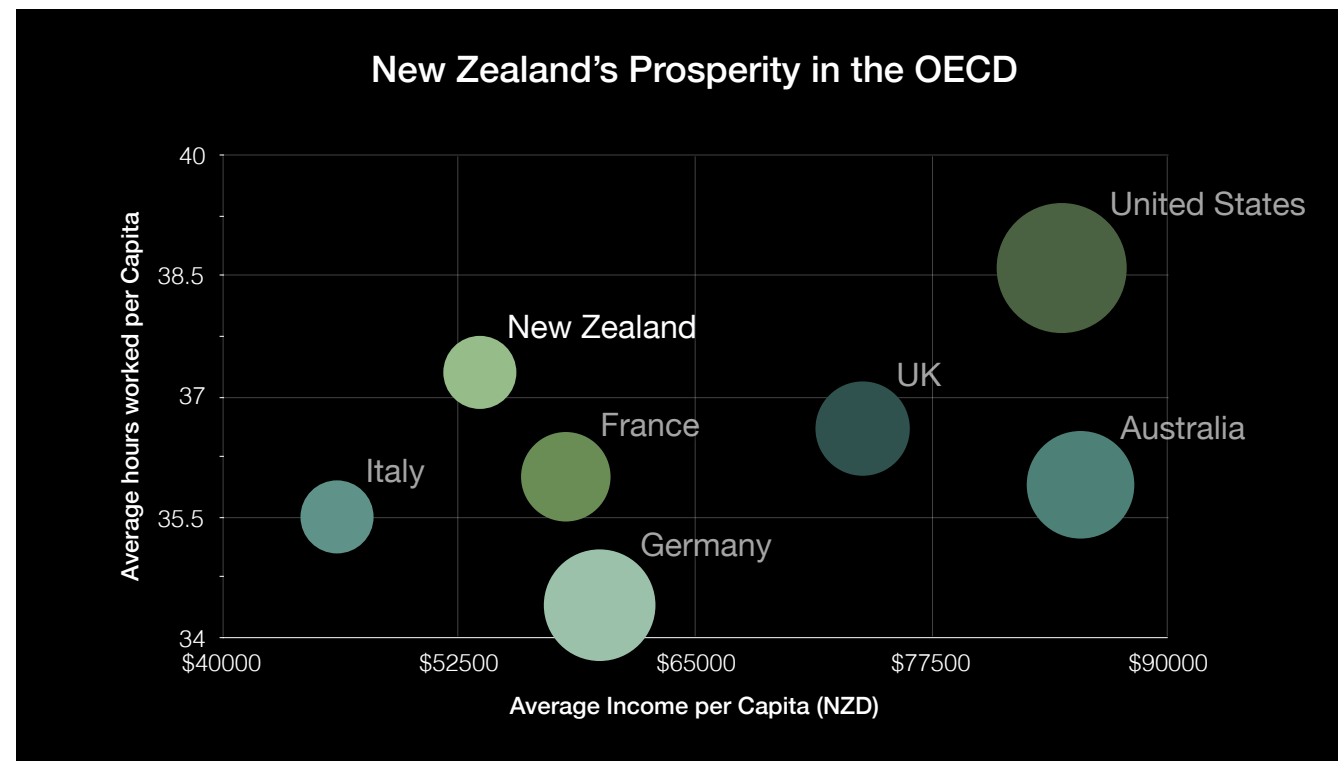
Sir Paul stated, that if we add 100 top tech companies into our economy, we'd significantly boost our GDP.

100 companies, similar to the likes of Xero or Fisher & Paykel healthcare.

100 top hitech companies

100 inspired entrepreneurs

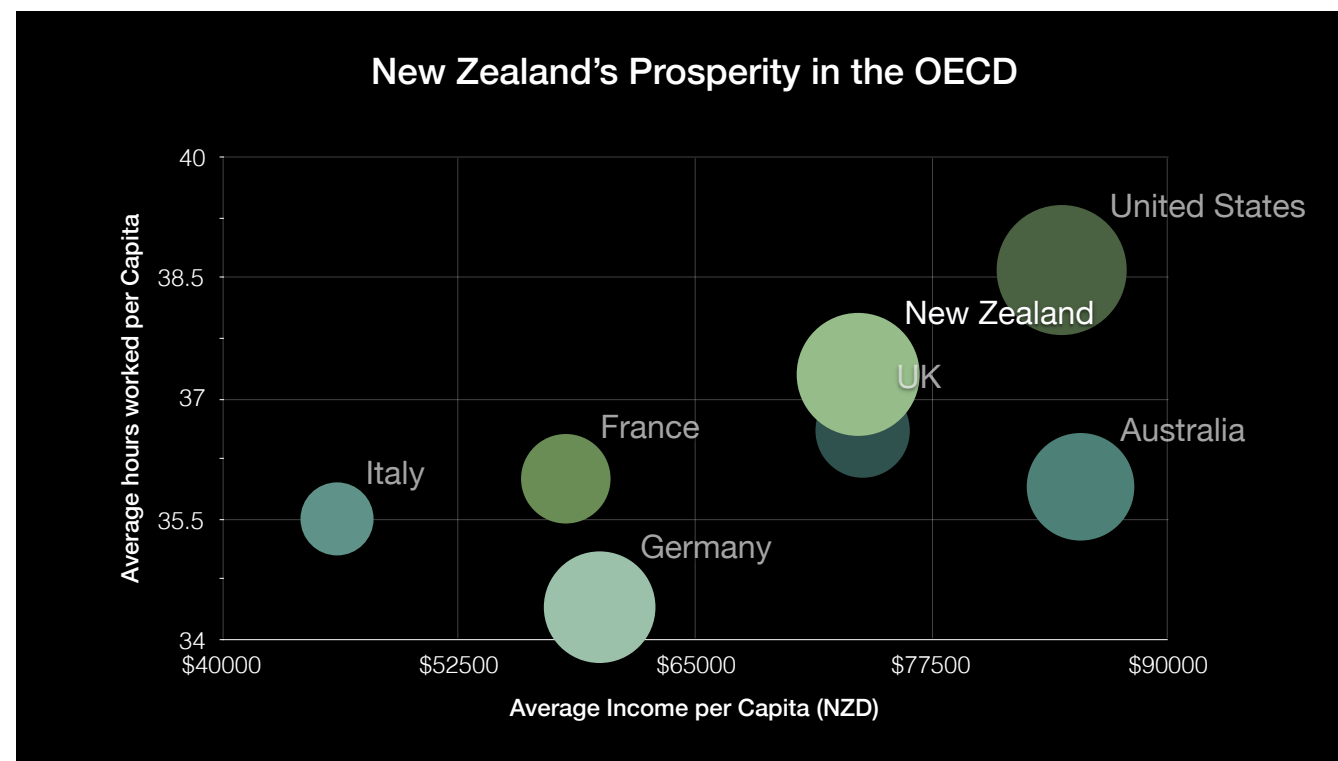
to add an additional 45 billion a year to our economy



You may be asking, now how does that work? So lets see what adding another 100 top tech companies to our economy does.

—

Model for this can be found here: <http://100companies.co.nz/companies.html>



And that's what we wanted, we've shifted our country to the right, and increased the size of our bubble.

Why did this happen?



# Revenue per Employee

Xero - \$210,000

Datacom - \$220,000

Pushpay - \$250,000

Fisher & Paykel Healthcare - \$259,000

Rakon - \$299,000

*Revenue per Employee = Company Revenue / Number of Employees*

The reason our GDP per capita jumped so high is because tech companies punch way above that \$125,000 revenue per employee mark we were after.

So the more people we get working in the tech industry, the higher our GDP per capita grows.

—

Various sources for this; TIN100 and wikipedia

# Median Salaries

Systems Architect - \$125,000

Project Manager – \$115,000

IT Consultant - \$105,000

Security Specialist – \$105,000

And as you all know, jobs in technology pay well above the average annual income of \$53,000.

Which is why we saw the the shift to the right.

But most import thing to note, it's the tech industry is one we can scale, we can have more tech companies, and bigger tech companies.

We're only limited by our amount of talented people in New Zealand.

—

<https://znze11wt5g3330m4e3it6h2a73-wpengine.netdna-ssl.com/wp-content/uploads/2016/07/Remuneration-Report-Jul-2016-1.pdf>



**“A whole country where talent wants to live”**

*–Professor Sir Paul Callaghan*

And for that reason, Sir Paul proposed we make New Zealand the place where talent wants to live.

To lure entrepreneurs, innovators, creators and makers, into the country.

Have people build their hi tech companies here, any pay their taxes, so we can all prosper together.



**Lets do it**

Well that all sounds great, lets do it.

But how?

Again, I don't have a solution for how to implement Sir Paul's vision.  
But yet again, smart people have figured it out for us.

# TalentNZ

A project from the McGuinness institute  
A non-partisan think tank working towards a sustainable future for New Zealand

The McGuinness institute have been steadily working on creating strategy to grow New Zealand's tech scene.

This has been done through a research project called TalentNZ.

In this project they've laid down a path for New Zealand to be transformed into a place where talent wants to live.



**Growth**  
**Attraction**  
**Retention**  
**Networking**

The strategy sets out four areas in which we need to focus on to help this transition happen.

We need to grow more talent here

We need attract talent from overseas

We need to make sure they stay here, in our industry

And we need to get everyone talking to one another, networking together.

# Sounds like we're sorted

So what's the problem?

It sounds like we're all sorted right? however.

In my mind, Sir Paul, and the McGuinness institute missed one important detail.



# Why?

Why?

Why, out of all the countries in the world, would you pick New Zealand?

Why would an entrepreneur, developer or engineer want to live here?

What would be the compelling reason, that would cause talented people to say  
“New Zealand is the place where I want to do business”?



**“They’re crazy nutcase passionate Kiwis who love it here”**

*–Professor Sir Paul Callaghan*

When Sir Paul explained why people like Sir Peter Jackson keep their companies in New Zealand, he alluded to our beautiful scenery as one of the main draw cards.

Saying: “they’re crazy passionate nutcase Kiwi’s who love it here.”

This is where I think we have a problem.



# 100% Pure

Is not something on the Government's agenda

Our environment isn't in good condition by any means, our streams and rivers are in a state, and the government hasn't set the bar very high for their quality.

I mean sure, our views can be breathtaking at times, but that's not unique to New Zealand, almost all countries in the world have beautiful views, you just have to know where to look.

And when you're working hard, trying to get a startup off the ground, do you really take time to notice the scenery?

No, I don't think people stay in New Zealand for our 100% pure environment.

# Communities

It's about the people

If I had to gamble, I'd bet people stay here for their friends, for their families and for their communities.

It's through communities we can achieve all the goals set out by the McGuinness institute.

It's through communities we can grow talent, attract talent, retain talent and allow networks to grow.

I believe the fundamental piece Sir Paul, and the the Mc Guinness institute missed was the community aspect.

He tangata, he tangata, he tangata.

It's the people, it's the people, it's the people.

And we can support the people through communities, to give tech to everyone.



I don't believe we can leave the task of making New Zealand the place where talent want's to live up to the Government.

They can't evolve and adapt fast enough, to keep up with technology.

And priorities change with governments, so we'd need all parties to come to an agreement about pushing forward this goal.



We can't leave the task of making New Zealand the place where talent wants to live to the companies either.

Their priorities are different to that of a community.

It's much easier for New Zealand companies to find talent by opening up offices internationally, than it is to address the underlying talent shortage.

But they're not to blame them for this, its just the way corporates generally operate, financial return on investment comes before any social return on investment.



I believe communities can solve this problem.

They can nurture and grow new talent

They can be built to support their people

They can be a place of belonging, that people find comfort in

But best of all, they have the ability be less biased than any corporate or government solution.



# New Zealand

A place where talent can thrive

So what I propose, is we, as a tech community, not aim to make “New Zealand place where talent wants to live”.

But instead aim to make “New Zealand a place where talent can thrive”.

So that technology can truly be for everyone

For the young and old

For technologists and non-technologist alike

# Tech for Everyone

Tech for Everyone

And how we do this, is by investing in our community.





**Growth**  
**Attraction**  
**Retention**  
**Networking**

If we go back to these four points of:  
Growth, attraction, retention and networking.

We'll look at each one under a community lens.

Analyse

What we're currently doing.

Where we want to be.

And how we can get there.

## **Growth**

Attraction

Retention

Networking

Lets start with Growth

There's no denying that we have a talent shortage in New Zealand

So it's fair to say that something has gone wrong somewhere in the education system.

# Digital Technologies

Can be found in your school subject guide.  
Alongside food tech, woodwork and metalwork...

If we look at the primary school system, they're in the middle of adopting new standards to allow digital technology to push forward into the current curricula, which is great.

But it stops a bit short.

And due to the combination of the fast rate of change of technology and the time it takes to build a new curriculum, I have serious doubts that the curriculum they create, will be and remain relevant going forward into the future.

**\$59,000**

The average income for a Primary School Teacher in New Zealand \*

\* [www.payscale.com](https://www.payscale.com) - Primary School Teacher Salary (New Zealand)

Then there's the problem that teachers don't have the skills needed to teach technology subjects.

And when they do learn the ropes of computer science, there's nothing stopping them from joining the IT industry, to get a significant pay rise, better working hours, and probably bonuses they've never dreamed of, like healthcare plans, paid lunches, and shares to name a few.

—

\* [www.payscale.com](https://www.payscale.com) - Primary School Teacher Salary (New Zealand)

# Deciles Social Investment

Evidence-based investment practices for social services

The government do try hard in this area, they're changing their strategy from deciles to social investment, but it's unknown how this will pan out.

Though I do sympathise for them, there's lots of red tape, bureaucracy and budgets that change depending on who's in power.



Occasionally, you get great things like the Mindlab, an innovative setup to help train teachers in digital and collaborative learning.

And while it's awesome that they're there, and have momentum behind them, it's important to remember that there's no one solution to all of our technical education problems.

Mindlab can't possibly solve all of them alone.



OMG Tech Rangers  
Code Club  
Coder Dojo  
Mozilla Maker Party  
The Hive & Gasworks Dunedin  
Hack Miramar  
Space and Science Festival Wellington  
Fablab Masterton  
Gather Workshops  
CodeCamp for Kids  
Rails|Dango Girls  
Nodebots  
Digital Natives Academy  
(I apologise if I've missed your organisation)

To solve the problem of teaching kids and growing talent, all we're left with are the community driven organisations.

Organisations that can change the system piece by piece.

Organisations like Gather workshops, who help push web technologies into schools, training teachers and working with students directly.

Organisations like OMG tech rangers, CodeClub Aoeteroa, the CoderDojos, all places where kids can go to learn about the wonders of technology.

Alongside them, we have a number of local organisations, dedicated to helping the people of their community.

These groups are typically run by volunteers, funded by good people and good companies.

They're a shining beacon of how the community can spread knowledge and grow talent.

**“The Industrial Revolution was about making physical things.  
Many of the manufactured goods that were once tangible  
objects have now been reduced to bits and bytes of data.”**

*–Jay Samit*

But that’s just the kids, what about adults?

In the not to distant future, large parts of our workforce will be replaced by machines, and as a result of this there will be countless adults who require retraining because their industry disappeared overnight.

There are a handful of organisations attempting to address this already, but we need more.



# Growth

Let's grow New Zealand's people to all be technologists

We can't just leave the growing of our talent to our current education system.

We need to build more communities and organisations to support spreading technology to everyone.

We need to put students and learning at the centre, and build curricula fit for the future.

To encourage our people to not be consumers of technology.  
But instead be creators, makers and hackers of technology.

Growth

**Attraction**

Retention

Networking

The attraction of talent to our shores is something our government and corporates are doing very well at.

# Marketing New Zealand

[looksee.co.nz](http://looksee.co.nz) [workhere.co.nz](http://workhere.co.nz) [newzealandnow.govt.nz](http://newzealandnow.govt.nz)

There are multiple websites dedicated to showcasing New Zealand's hi tech scene and beautiful scenery to people overseas.

Websites created in conjunction with various government departments, offering work in some of our most prestigious tech companies.

# Our community profile

Larger than your average

However, if we set out to build a large public community, we can help attract talent too.

We must continue to run tech conferences that put New Zealand on the international stage, conferences like Webstock, and the sadly discontinued Kiwicon, and even this newly minted nz.js con.

Conferences that invite guest speakers from around the world, to show off New Zealand, our communities and our people.

We need more of these.

We need more local meetups to publish their content online for everyone in the world to watch and learn from.

We need more camps, huis and events of all types.

We need more things happening that create noise on the net, to make outsiders envious about all the good stuff going on inside New Zealand.

# The Ivory Tower

That's not the only attraction issue on our plate.

As odd as it sounds, we need to attract our own University students into our industry.

Because the academic system doesn't offer an easy route into the tech industry, they may end up finding jobs abroad.

Here in Wellington, If it weren't for Summer of Tech, an internship and industry training program, we'd be losing a lot of our most talented students overseas.

But like the rest of the community driven organisations, Summer of tech need our help too.

They need help running events, teaching bootcamps, reviewing CVs and guiding students.

Hopefully one day, in the not too distant future, they'll be in all of our cities around New Zealand, but to do so they need our help.

# Attract

We need to make New Zealand the brightest star on the tech scene

To summarise attract.

We need to increase the public profile of New Zealand's technical community.

So that others, from all around the world, start talking about this little country of ours.

We need to do this so we can attract people, nationally and internationally into our tech community, so we can all prosper together.



Growth

Attraction

**Retention**

Networking

Once we're growing and attracting talent, we have to ensure they want to stay here, in New Zealand, but more importantly, in our industry.

To be brutally honest, we suck at retention.

**“Only the foolish would think that wisdom is something to  
keep locked in a drawer.”**

*–Rasheed Ogunlaru*

Let's start with the easiest problem we have, career growth.

We need to ensure everyone in our industry has adequate mentoring, so they know where they're going and have the help needed to get there.

There's no point having all the talent in the world, only to have it phase out when a generation retires.

But because good mentoring is best served as a one on one exercise, it's tricky to scale.



# 30 Minutes

To help guide a growing individual in this industry of ours.

However, if we can find people willing to sacrifice 30 minutes a fortnight, that's all it'll take.

Half an hour a fortnight, over a coffee or tea, where you can share ideas and experiences with a growing individual, helping them to reach their full potential.

Then there's the hard problems

**Women make up 21%**  
of the ICT workforce in New Zealand

\* <https://www.absoluteit.co.nz/industry-reports/> - Tech Remuneration Report - July 2016

Like, why are there so few women in tech?

—

\* <https://www.absoluteit.co.nz/industry-reports/> - Tech Remuneration Report - July 2016

# NZ Māori make up 6%

of the ICT workforce in New Zealand

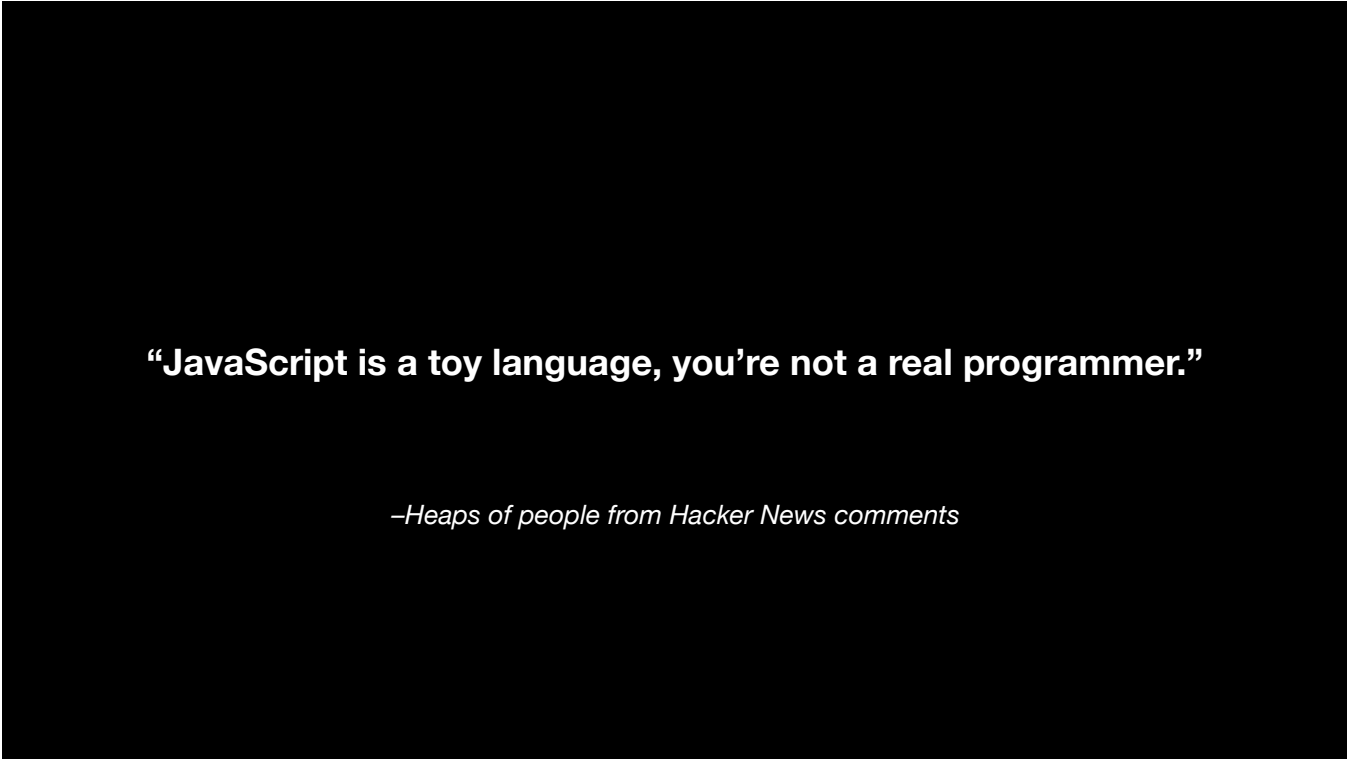
\* <http://www.mbie.govt.nz/publications-research/publications> - Māori me te Ao Hangarau

What about New Zealand Maori representation, or other pacific island ethnicities, why aren't they being adequately represented in our industry?

—

<https://www.tpk.govt.nz/en/a-matou-mohiotanga/employment-and-income/maori-self-employment/online/2>

\* <http://www.mbie.govt.nz/publications-research/publications> - Māori me te Ao Hangarau



**“JavaScript is a toy language, you’re not a real programmer.”**

*–Heaps of people from Hacker News comments*

Then there’s contempt culture pushing people away from the tech scene.

Enforcing that because you don’t code with my language, you’re a lesser coder than me.

It makes talented people feel unwelcome, purely based of the tools that they use.

# Occupational burnout

“Characterized by exhaustion, lack of enthusiasm and motivation, feelings of ineffectiveness, and also may have the dimension of frustration or cynicism”

\* [en.wikipedia.org](https://en.wikipedia.org) - Occupational burnout

Then as an industry, we have a tendency to burn ourselves out, whether it's from working in a startup grinding through those 70 hour work weeks or from being the hero developer at your workplace, the person that everyone looks to in times of need.

Everything is stacked against us, and we just work until we collapse.

# Bias is everywhere

And there's no one solution to solve it

And lets not beat around the bush here, on top of all of that, we've got embedded gender and race bias rampant throughout all levels of our industry.

Making it incredibly hard for anyone who is not a white cisgender man to get by.

# Talk to your boss

If you should notice any one of these biases in your company, then you need to speak up.

talk to your employer.

ask them, what they're doing to address the problem.

use your power to bring about change from within

you probably have much more sway with your boss than you realise.

And if you find out they'd like to be a more diverse employer, but don't know how, then point them towards our community, let us help.

Because when they change, and become a fully inclusive workplace, everyone benefits.



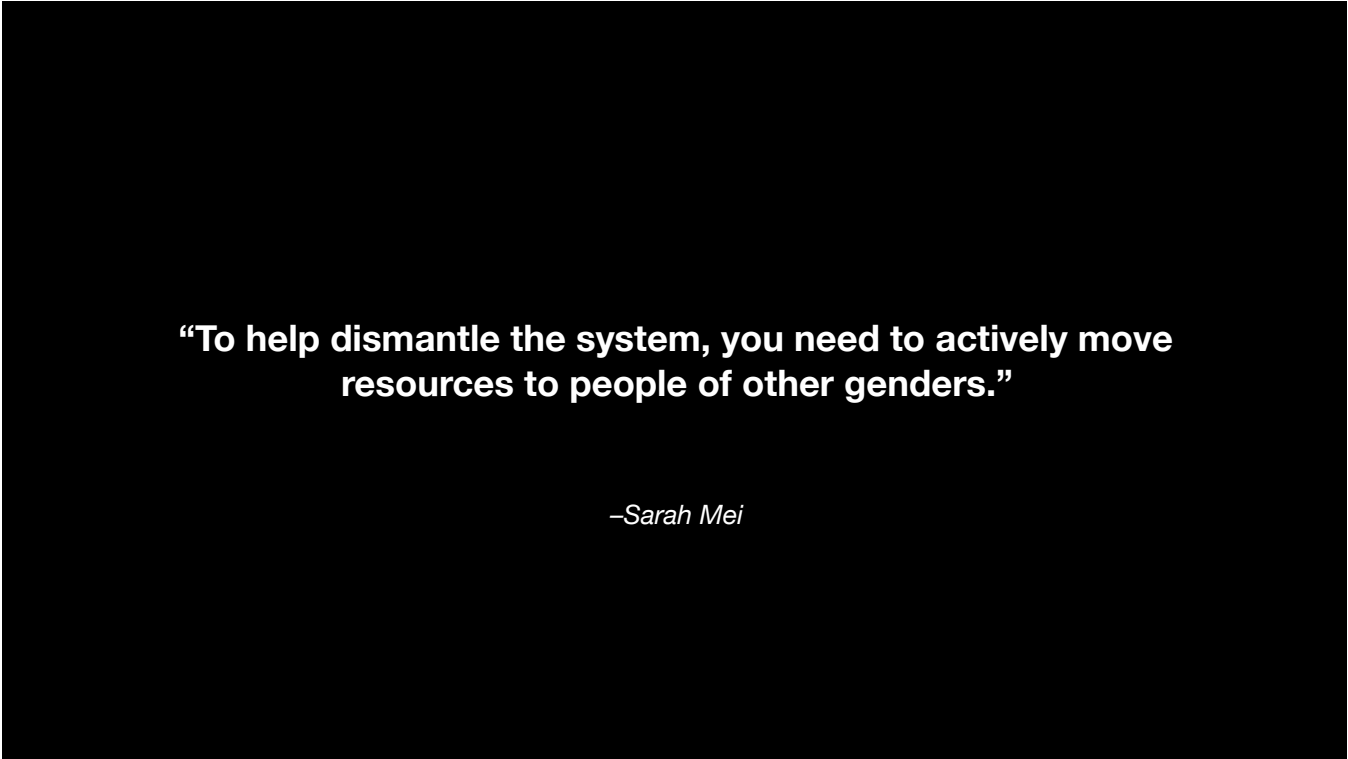
**Lets all start the conversation**

All of what I've just mentioned are very, very hard problems.

And the change needed can't be solved with money alone,  
The change needs to come from within our community and from within our society.

We need to start these discussions, to break down the stigmas that surround sharing our personal struggles and fears.





**“To help dismantle the system, you need to actively move  
resources to people of other genders.”**

*–Sarah Mei*

We need to help address the structural mental discrimination, sexism and racism we have within our industry.

By building support networks, working groups, meetups, and online channels where people can have safe, open and frank discussions about these issues.

I believe that through discussion, solutions can be found, and from there, actions can be taken to address our problems.

# Retention

Tech has to be for everyone, for everyone to be in tech

To retain our people, we have to be aiming for longevity of careers in tech,  
to be more acceptant of everyone, no matter the background,  
and to cater for all the shapes and sizes us humans come in.

Tech has to be for everyone, for everyone to be in tech.

And it all starts with a conversation



Growth

Attraction

Retention

**Networking**

And finally to grow New Zealand to it's potential, we need to connect everyone together  
we need to connect talent with other talent  
our community with other communities  
and we need to connect our cities and towns together.

# Getting to know each other

Because a disconnected community is no fun

Connecting our talent together can happen in any way, shape or form.

Through our meetups, community events, hackathons, conferences or online forums.

Through these hubs, talented people will meet, and networking is sure to happen.

We can't forcibly create these connections, but we can create the mediums in which the connections can take place.

## Connecting our community to others

When we're growing our community, we need to be looking at connecting our technical community with other non-technical ones.

Like religious groups, Iwi, ethnic communities, NGOs and non profits.

Working with these non-technical communities, puts us in a position to work on bigger picture problems, giving us the chance to address issues that plague society at a higher level.

# From coast to coast

We need to connect everyone, from the country to the cities

Connecting our towns and cities should also be a high priority, starting a meetup in your local town is a great way to kick this off.

By forming local hubs, we can get to know one another better, and allow for distributed communities outside of our city centres.

Through these distributed hubs, communication will become easier, and allow for a greater feeling of interconnectedness.

# It just takes one person

To lead the charge and cause change

It largely relies on one person, leading the charge and forcing about change, One person starting a meetup or regular event.

Just one person has the ability to create a new community.

But there in lies the danger, if that one person becomes burnt out, moves away or starts a family, then the community can be at risk of dying.

**A leader is best when people barely know they exist  
When their work is done, their aim fulfilled,  
the people will say:**

**“We did it ourselves”**

*– Laozi 老子*

We need to build resilient communities, where leadership is distributed, and easily passed on.

So when you start up community hub, look towards creating organisational teams, and sharing responsibility, and be sure to think about how you'll pass on the mantle of leadership from the very beginning.



# Code of Conduct

And lastly, when you're starting anything people, ensure you have a code of conduct, and ensure that you're willing to enforce it.

Code of conducts are how you can make everyone feel safe within your community, by having one in place, and knowing how to use it, you can ensure the safety of everyone within.

# Networking

Lets create the mediums in which networking can happen.  
People will take care of the rest

Connecting everyone together is something we can't address directly, we achieve this through creating the right environment where connections can grow and flourish.

Where people can meet other people, share ideas and spread knowledge.

Where people can make new friends, and create strong, lasting bonds.

# Tech for Everyone

Through communities, this is achievable

So those are the four main points we need to work on to align our tech community with Sir Paul's vision.

In doing so, we should aim to create a country where everyone, young and old, has equal access to learning technology.

Where everyone has the chance to grow their talents.

Where entrepreneurs no longer have a shortage of talented people to call on when they're building their companies.

Where immigrants feel instantly welcomed into our community.

Where they can make new friends and bonds so they'll want to stay.

Where all of us can feel safe, comfortable and welcome in this industry of ours.

But above all, we should be aiming to include everyone in tech, all communities, all groups, all peoples.



# We need you

{pause}

To do all this, we need you.

We need you to help teach our children

We need you to help mentor others that have less years of experience than your own

We need you to run events

We need you to attend events

We need you to create community networks

We need you to share your ideas

We need you to help us grow New Zealand

We need you to help us get tech to everyone, and make New Zealand reach its full potential

# Tech for Everyone

Lets make New Zealand a place where talent can thrive

So let's all work together to make New Zealand a place where talent can thrive.

And by doing so, make New Zealand prosperous so everyone in our country can benefit.



[javascript.org.nz/help](https://javascript.org.nz/help)

Everyone is different and people can help in different ways, if you're still thinking, I'd like to help, but I don't know where to start.

Then go to this site.

Fill out your name and email and hit submit.

If you can do that, I'll point you in the right direction where you can make an impact.

I'll send you to someone that needs your help.

I'll try my hardest to get you, helping us.

My goal is to lower the barrier to entry as much as possible, so more people can contribute to New Zealand's technical communities.

And if just one of you fills out that form, I'll consider this conference talk a success.

**Ka kite anō**

And that's it

Thank you all for listening

I hope you all enjoyed the conference

Ka kite anō