Perth 2013

STARTUP ECOSYSTEM

A report on the People, Groups and Companies involved in Perth's early stage software company ecosystem.

BY BOUNDLSS

Data Mining in Australia's Mining Capital
ECOSYSTEM

A simplified network map with key community builders.

ECOSYSTEM

- Silicon Valley Ecosystem
- East Coast Ecosystem
- STARTUP WEEKEND
- SPACECUBED
- COMMERCIALISATION AUSTRALIA
- AGILE PERTH
- OZAPP AWARDS
- Larry Lopez
- Sam Birmingham
- Phil Morle
- Dash Dhakshinamoorthy
- Brodie McCulloch
- Jim Wyatt
- Matt Macfarlane
- Marcus Tan
- Claire Robertson
- Sheryl Frame

DEFINITIONS

- Startup: A company primarily focused on technology, startups or entrepreneurship.
- Accelerator: A seed accelerator invests seed capital in a startup and an incubator does not. Accelerator takes an equity portion of the startup and an incubator does not.
- Incubator: An organisation that offers mentoring and resources to help startups.
- Mentorship: A relationship where a more experienced person helps a less experienced person.
- Talent: The skills and abilities of an individual.
- Expertise: The knowledge and skills of an individual in a particular field.
- Network: A group of people who are connected through personal or professional relationships.
- Community: A group of people who share a common interest or goal.
- Eco-system: A network of people, organisations and events within the city of Perth.

THE PROJECT

- In order to gather information on the technology company ecosystem within the city of Perth, we endeavored to map the primary people, organisations and activities within the city. We worked in partnership with the City of Perth, and had superb assistance from the community. We gathered information via interviews, a workshop, and return for equity.

In terms of our scope, we endeavored to map the primary people, organisations and activities within the city. We worked in partnership with the City of Perth, and had superb assistance from the community. We gathered information via interviews, a workshop, and

PEOPLE

- #CO: INDUSTRY TYPE
- #CO: PEOPLES
- #CO: SKILLS
- #CO: AGE
- #CO: TEAM SIZE
- #CO: GROUPS
- #CO & GROUPS: FOUNDED
- #STARTUPS
- #ASSOCIATED COMPANIES
- #PEOPLE

STATISTICS

- Estimate of core startups within Perth
- Associated by one degree with startups
- Companies associated with people
- #PEOPLE
- #CO & GROUPS: FOUNDED
- #ASSOCIATED COMPANIES
Perth is a city focussed on energy and resource production. While this has brought tremendous prosperity to the city, the seeds need to be planted for other industries to flourish if Perth is to be a truly vibrant, creative and economically stable city in the long term. This report looks at one of those newly planted seeds.

Digital technology is transforming society and industry, and given the low capital requirements required, it’s ability to transcend distance and Perth’s proximity to Asia it provides opportunities for future growth. The aim of this project was to map the early stage technology company ecosystem within the city of Perth; establish a benchmark against which to measure future growth; and to identify key people, organisations and events within the community - particularly community builders. Producing a summary report, infographic and an interactive web application

In terms of our scope we endeavored to map the primary people, organisations and activities within the city. We worked in partnership with the City of Perth, and had superb assistance from the community. We gathered information via interviews, a workshop, and research. We also gathered a large database of people involved in technology companies within the Perth metro area using data from Linkedin.com and Meetup.com (a platform for organising informal regular gatherings).

There are varied definitions of a technology startup but for this project we defined a 'startup' as a company primarily focused on developing software, with a scalable business model, capable of rapid growth, and under five years in age.

While we have tried to be comprehensive we have definitely missed many critical people and organisations. If we missed something please let us know and we'll include it next year.

To view the full interactive ecosystem map and add yourself visit startup.boundlss.com

Many thanks,

Jonah & Mike
Co-founders
Boundlss
Core startup companies along with key support organisations.

**COMPANIES (CO)**

Adapttor (consulting)
Advanced Oilfield Applications (startup)
Agworld (startup)
Amazon Web Services - Perth (est tech)
APE Mobile (startup)
Aussiehome.com (startup)
Bingy Bongy (startup)
Bink (startup)
Bonobo (startup)
Boozle (startup)
Calico Global (startup)
Calorie Story (startup)
Canva (startup)
City Beach Software (startup)
Cloudmine (startup)
Creative Matters (startup)
CV Check (startup)
DIY Storytime (startup)
Eccentric Energy (startup)
Eight Spots/Firebrand Projects (startup)
Emergination (consulting)
Enjoy Perth (consulting)
eTool (startup)
Faulkner Lab (startup)
Fetch - Perth (media)
Filter Squad/Deskvr (startup)
Floq/Boundless (startup)
FlyRight (startup)
Frontier Group (consulting)
Fusion Books (startup)
Gainspiration (startup)
Geo Oceans (startup)
Global Composition (consulting)
GlobalTech Corporation (startup)
GoPC (startup)
Green Ivy Media (startup)
Greensense (startup)
Groupmap (startup)
HALO Medical Devices (startup)
Health Engine (startup)
HiSeis (startup)
Humaan (consulting)
iCetana (startup)
IDataMap Corporation (startup)
Inhouse Group (startup)
iWebGate Technology (startup)
Just 1 Link (startup)
KnuckleDown (startup)
MagnePath (startup)
Marketech/FastIQ (startup)
Mendojo (startup)
Motify (startup)
NearMap (startup)
OpenLab (startup)
Pet Rescue (startup)
Popfossa (startup)
Poppyjam (startup)
Professional Development Online (startup)
Rate The Bean (startup)
Red Meets Blue (consulting)
RemoteConsult (startup)
Resonate Social Media (consulting)
Saron Education (startup)
Sea Breeze (startup)
Secure Systems (startup)
Skrysta (startup)
SmokinThreads & Droodl (startup)
Southern Payment Systems/Pin (startup)
Stochastic Simulation (startup)
Stumpjump (consulting)
Syraptor (startup)
Thoughtworks - Perth (consulting)
Tidy Club (startup)
Trades Cloud (startup)
Virtual Gaming World (startup)
Virtual Observer (startup)
WeStart (startup)
Wordcanvas (startup)
Zombal (startup)

**INCUBATION**

Curtin Ignition - Perth (program)
Founder Institute - Perth (accelerator)
GovHack (hackathon)
Innovation Centre of WA (incubator)
Perth Startup School (program)
Springboard (accelerator)
Startup Weekend - Perth (program)
Techtrails (program)

**FUNDING**

Aurélius Digital - Perth (angel network)
Commercialisation Australia (govt)
Future Health Ventures (venture capital)
Triple C Consulting (venture capital)
WA Angel Investors (angel network)
Yuwa Capital (venture capital)

**GROUPS (#MEMBERS)**

Agile Perth (761), Morning Startup (483),
Women in Technology WA (450), Internet
Marketing (427), Port80 (385), Silicon
Beach (363), iOS Developers (331), Agile
Meetup Group (315), Entrepreneurs (282),
Young Professionals (260), UX Perth (183),
DevOps (134), Microsoft Cloud Computing
(131), Ruby on Rails Oceania (129), Lean
(121), Wordpress (111), Generation Y
Entrepreneurs with Vision (103), Java
Script (91), Web Designers (90), Drupal
(88), Web Accessibility & Inclusive Design
(86), West Coast Makers (67), UWA MBA
Entrepreneurship & Innovation (54), UX
Designer & Developer Network (51),
Crowdfunding Downunder (49), Business
Reboot - Workshops and Networking (47),
Functional Programmers (43),
Linux.conf.au (43), eGroup WA (40), Big
Data (38), Django User Group (38), Linux
Users Group (34), Cloud Computing (25),
Technology Park Networking Group (23),
Data Stats Vis Meetup (20), Foresight,
Innovation, Sustainability Hothouse (17),
Joomla (14), Sage (14), Graphic Designers
(9), 21st Century Business Modeling (8),
Microsoft Dynamics CRM Group (8),
StartGovernGrow (8), Enterprise Tuesday

**SUPPORT**

Australian Information Industry
Association.
Australian Computer Society
Artifactory (hardware /makerspace)
City of Perth (govt)
Business Foundations (education nfp)
Curtin University (education)
Department Commerce (govt)
Form (think tank)
Innovator of the Year (award)
Institute of Electrical & Electronic
Engineers.
iVEC (govt)
Northbridge Piazza Screen (govt)
OzApp Award
Social Innovation in WA (edu nfp)
Spacecubed (coworking)
Sync Labs (coworking)
WA Information Technology &
Telecommunications Award.
WA Inventor of the Year Award
West Coast Makers (makerspace)

**DEFINITIONS**

Startup: a company primarily focused on
developing software, with a scalable
business model, capable of rapid growth,
and under five years old.

Consulting: a company working in the
digital technology industry delivering a
less scalable business model, e.g. a
bespoke software development firm,
design studio or consulting company.
Many build potentially scalable internet
products (e.g. iPhone apps) alongside their
consulting services, and we have included
those here.

Est Tech: an established "startup"
company active within the ecosystem.

Incubator: an organisation that offers
mentoring and resources to help startups
grow.

Accelerator: we differentiate an
accelerator from an incubator in that an
accelerator takes an equity portion of the
startup and an incubator does not.

Seed Accelerator: we differentiate a seed
accelerator from an accelerator in that a
seed accelerator invests seed capital in
return for equity.

Groups: we have focussed on groups that
meet together to discuss digital
technology, startups or entrepreneurship.
This data is almost entirely based on
meetup.com groups.
A report on the People, Groups and Companies involved in Perth's early stage software company ecosystem.

#CO: INDUSTRY TYPE

<table>
<thead>
<tr>
<th>Industry Type</th>
<th>#Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Technology &amp; Services</td>
<td>151</td>
</tr>
<tr>
<td>Internet</td>
<td>113</td>
</tr>
<tr>
<td>Marketing and Advertising</td>
<td>85</td>
</tr>
<tr>
<td>Computer Software</td>
<td>57</td>
</tr>
<tr>
<td>Financial Services &amp; Banking</td>
<td>50</td>
</tr>
<tr>
<td>Higher Education</td>
<td>36</td>
</tr>
<tr>
<td>Govt &amp; Non-Profit Organisations</td>
<td>35</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>31</td>
</tr>
<tr>
<td>Management Consulting</td>
<td>29</td>
</tr>
<tr>
<td>Online Media</td>
<td>28</td>
</tr>
</tbody>
</table>

#GROUPS: VENUES

- Spacecubed: 12
- Bankwest: 3
- 43 Below: 2
- Bouncing Orange: 2
- Moon & Sixpence: 2
- Milk & Honey Cafe:
- The Garden, Balmoral Hotel:
- UWA, Art Gallery of WA:
- Hola Creative Office:
- Doghouse Media, Sync Labs: all 1

#GROUPS: SUBURB

- CBD: 21
- Northbridge: 2
- West Perth: 2
- Leederville: 2
- Claremont: 2
- East Perth: 1
- Highgate: 1
- Burswood: 1
- Nedlands: 1
- Bentley, Wangara: both 1

PEOPLE: COMMON SKILLS

- Business Strategy: 7%
- Start-ups: 6%
- Entrepreneurship: 6%
- Strategy: 5%
- Strategic Planning: 4%
- Social Media: 4%
- Project Management: 4%
- Management: 4%
- Online Marketing: 4%
- E-commerce: 3%

#CO TEAM SIZE

- 1-20: 29
- 21-50: 251
- 51-200: 252
- 201+: 129

#PEOPLE

Associated by one degree with startups

2,345

#ASSOCIATED COMPANIES

Companies associated with people involved in startups (via Linkedin)

646

#STARTUPS

Estimate of core startups within Perth

100+

#GROUPS

Associated with startups, technology and entrepreneurship

41
**FUNDING**

Venture Capital, Private Equity and Angel funding of startups over the last five years, 2008 - 2013.

## VC FUNDING PER CAPITA

<table>
<thead>
<tr>
<th>Country</th>
<th>Funding Per Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon Valley</td>
<td>$3,945</td>
</tr>
<tr>
<td>Israel</td>
<td>$1,70</td>
</tr>
<tr>
<td>USA</td>
<td>$0.75</td>
</tr>
<tr>
<td>Switzerland</td>
<td>$0.69</td>
</tr>
<tr>
<td>Norway</td>
<td>$0.50</td>
</tr>
<tr>
<td>Sweden</td>
<td>$0.37</td>
</tr>
<tr>
<td>Finland</td>
<td>$0.26</td>
</tr>
<tr>
<td>Denmark</td>
<td>$0.15</td>
</tr>
<tr>
<td>France</td>
<td>$0.14</td>
</tr>
<tr>
<td>Britain</td>
<td>$0.14</td>
</tr>
<tr>
<td>Ireland</td>
<td>$0.13</td>
</tr>
<tr>
<td>Netherlands</td>
<td>$0.13</td>
</tr>
<tr>
<td>Belgium</td>
<td>$0.11</td>
</tr>
<tr>
<td>New Zealand</td>
<td>$0.10</td>
</tr>
<tr>
<td>Austria</td>
<td>$0.08</td>
</tr>
<tr>
<td>Perth (incl govt funds)</td>
<td>$0.059</td>
</tr>
<tr>
<td>Australia</td>
<td>$0.04</td>
</tr>
<tr>
<td>Perth (excl govt funds)</td>
<td>$0.0296</td>
</tr>
<tr>
<td>Melbourne Cup Bets</td>
<td>$0.09</td>
</tr>
<tr>
<td>2012 Aus Olympic Team</td>
<td>$0.1410</td>
</tr>
</tbody>
</table>

## STARTUP RAISES

<table>
<thead>
<tr>
<th>Investment</th>
<th>Startup Company</th>
<th>Investors</th>
</tr>
</thead>
<tbody>
<tr>
<td>$10,400,000+</td>
<td>Health Engine</td>
<td>Future Health, Telstra, Seven West Media</td>
</tr>
<tr>
<td>$4,000,000</td>
<td>HiSeis</td>
<td>CA, Unknown Investors</td>
</tr>
<tr>
<td>$4,000,000</td>
<td>iWebGate Technology <em>(founded 2004)</em></td>
<td>CA, Unknown Investors</td>
</tr>
<tr>
<td>$3,544,990</td>
<td>Globaltech Corporation</td>
<td>CA, Unknown Investors</td>
</tr>
<tr>
<td>$3,000,000</td>
<td>Canva</td>
<td>CA, Bill Tai, Blackbird, Square Peg and 15 more</td>
</tr>
<tr>
<td>$2,500,000</td>
<td>Virtual Gaming World</td>
<td>Triple C Consulting</td>
</tr>
<tr>
<td>$2,250,000</td>
<td>Agworld</td>
<td>CA, Yuuwa</td>
</tr>
<tr>
<td>$2,115,000</td>
<td>iCetana</td>
<td>CA, Yuuwa, Broadband Innovation Award</td>
</tr>
<tr>
<td>$2,000,000</td>
<td>Inhouse Group</td>
<td>CA, Angel Group Perth</td>
</tr>
<tr>
<td>$1,350,000</td>
<td>Filter Squad/Discovr</td>
<td>Yuuwa</td>
</tr>
<tr>
<td>$1,200,000</td>
<td>Stochastic Simulation</td>
<td>CA, Unknown Investors</td>
</tr>
<tr>
<td>$993,298</td>
<td>Skrydata</td>
<td>CA, Unknown Investors</td>
</tr>
<tr>
<td>$504,350</td>
<td>Saron Education</td>
<td>CA, Unknown Investors</td>
</tr>
<tr>
<td>$500,000</td>
<td>Calico Global</td>
<td>CA, Unknown Investors</td>
</tr>
<tr>
<td>$500,000</td>
<td>CV Check Pty</td>
<td>CA, Unknown Investors</td>
</tr>
<tr>
<td>$500,000</td>
<td>Eccentric Energy</td>
<td>CA, Unknown Investors</td>
</tr>
<tr>
<td>$500,000</td>
<td>HALO Medical Devices</td>
<td>CA, Unknown Investors</td>
</tr>
<tr>
<td>$500,000</td>
<td>Secure Systems</td>
<td>CA, Unknown Investors</td>
</tr>
<tr>
<td>$500,000</td>
<td>Trades Cloud</td>
<td>CA, Unknown Investors</td>
</tr>
<tr>
<td>$499,610</td>
<td>MagnePath</td>
<td>CA, Unknown Investors</td>
</tr>
<tr>
<td>$477,876</td>
<td>Southern Payment Systems/Pin</td>
<td>CA, Unknown Investors</td>
</tr>
<tr>
<td>$394,388</td>
<td>Professional Development Online</td>
<td>CA, Unknown Investors</td>
</tr>
<tr>
<td>$391,500</td>
<td>iDataMap Corporation</td>
<td>CA, Unknown Investors</td>
</tr>
<tr>
<td>$360,500</td>
<td>Geo Oceans</td>
<td>CA, Unknown Investors</td>
</tr>
<tr>
<td>$261,400</td>
<td>Virtual Observer</td>
<td>CA, Unknown Investors</td>
</tr>
<tr>
<td>$255,000</td>
<td>eTool</td>
<td>CA, Unknown Investors</td>
</tr>
<tr>
<td>$220,000</td>
<td>Floq/Boundless</td>
<td>Angel Investors</td>
</tr>
<tr>
<td>$162,514</td>
<td>Faulkner Lab</td>
<td>CA, Unknown Investors</td>
</tr>
<tr>
<td>$100,000</td>
<td>Curtin Uni - Data integrity toolkit</td>
<td>CA, Unknown Investors</td>
</tr>
<tr>
<td>$100,000</td>
<td>Marketech/FastIQ</td>
<td>CA, Unknown Investors</td>
</tr>
</tbody>
</table>

## LOCAL FUNDING SOURCES (ESTIMATES)

<table>
<thead>
<tr>
<th>Fund Size</th>
<th>Fund</th>
<th>% Total Pool</th>
</tr>
</thead>
<tbody>
<tr>
<td>$20,000,000</td>
<td>Yuuwa Capital <em>(based on est. 50% of $4m fund is digital)</em></td>
<td>28%</td>
</tr>
<tr>
<td>$12,591,793</td>
<td>Commercialisation Australia (CA)</td>
<td>18%</td>
</tr>
<tr>
<td>$10,000,000+</td>
<td>Innovation Co-investment Program (Dept Commerce)</td>
<td>14%</td>
</tr>
<tr>
<td>$9,872,713</td>
<td>Unknown Angel Funds Matched to CA Grants</td>
<td>14%</td>
</tr>
<tr>
<td>$5,200,000</td>
<td>Telstra Ventures</td>
<td>7.5%</td>
</tr>
<tr>
<td>$5,200,000</td>
<td>Seven West Media</td>
<td>7.5%</td>
</tr>
<tr>
<td>$2,500,000</td>
<td>Future Health</td>
<td>4%</td>
</tr>
<tr>
<td>$2,500,000</td>
<td>Triple C Consulting</td>
<td>4%</td>
</tr>
<tr>
<td>$1,000,000+</td>
<td>Angel Group Perth</td>
<td>1%</td>
</tr>
<tr>
<td>$1,000,000+</td>
<td>Innovation Investment Facilitation Program (Dept Commerce)</td>
<td>1%</td>
</tr>
<tr>
<td>$300,000</td>
<td>OzApp Awards</td>
<td>0.43%</td>
</tr>
<tr>
<td>$190,000</td>
<td>Innovator of the Year (Dept Commerce)</td>
<td>0.27%</td>
</tr>
<tr>
<td>$20,000+</td>
<td>Innovation Vouchers Program (Dept Commerce)</td>
<td>0.03%</td>
</tr>
<tr>
<td>&lt;$20,000</td>
<td>Aurelius Digital</td>
<td>0.03%</td>
</tr>
</tbody>
</table>

## TOTAL FUND POOL

Based on public disclosures of fund size: $70m

## AVG FUND POOL PER YEAR

Based on total pool divided by five (years): $14m

## FUNDING PER CAPITA

Based on yearly pool divided by population: $5.66
Startup companies that received funding and the associated investors, directors and founders. Size of node isn’t related to fund size.

**HISEIS**

**$4m**

Founded: 2009, Curtin spin off
Type: seismic services, 2d and 3d surveys and modelling. Software and hardware.
Founders: Anton Kepic, Milovan Urosevic, Charlie Morgan, Peter Williams
Investors: Curtin University, Commercialisation Australia

**CANVA**

**$3m**

Founded: 2012, originally based in Perth
Type: web application for graphic design
Founders: Melanie Perkins, Cliff Obrecht and Cameron Adams
Investors: Blackbird Ventures, Square Peg, 500 Startups, Lars Rasmussen, Bill Tai, Ken Goldman, Commercialisation Aus

**VIRTUAL GAMING WORLD**

**$2.5m**

Founded: 2010
Type: social gambling platform, hybrid online casino with facebook integration
Founder: Laurence Escalante
Investors: Triple C Consulting

Top three raises excluding; Health Engine which we highlight on page 1; iWebGate and Globaltech are more than five years old.
Groups from meetup.com related to startups, tech and entrepreneurship, with their organisers and venues.

**KEY**

- Group
- Incubator
- Founder
- Company or Person
- Venue

**THE CITY**

*fifty two*

% of meetups are located within the CBD, Northbridge or West Perth.

**SPACECUBED**

*10,000+*

visits, 150 events, 320 members, 12 meetup groups for tech startups, 18 months old.
INCUBATION

Mentors, sponsors and organisers associated to the two main incubators in Perth - Startup Weekend and the Founder Institute.
#8. Talent Attraction:
Startup Weekend and oZApp are good examples of events that bring the community together and attract people from other international
resource wealth in Perth into the startup ecosystem.

#4. Cross Discipline Collaboration:
dropping rapidly. While technology firms aren't made up of only computer geeks (perhaps 50-60%) they do require a core set to develop
create opportunities to bring non-tech people and domain specialists together with software
know the site and business model.

#3. Inspire Young Students:
Perth has a growing stable of strong tech companies such as Filtersquad, iCetana and the Inhouse Group, with good valuations, such as
publish hero stories.

#2. Publish Hero Stories:
#1. Ecosystem Integration:
COMMUNITY IDEAS
While technically older than our five year cut off, we've included them as the current founders took the reigns in 2010.

### KEY NODES
Key community builders (eight organisations and eight people) within the ecosystem, and their organisational relationships.

### KEY: RELATIONSHIP TYPE
- Founder, Director or Organiser
- Employee or CA Case Manager
- Knows (ecosystem links incl. investments)
- Investment, Grant or Sponsorship
- Mentor or Judge
- Located at
As part of the project we held a workshop with thirty key members of the ecosystem and asked them to help map the community, and vote on the key nodes in the ecosystem. Alongside this we used fund size and measures of network centrality to establish the key nodes.

*We have included two measures of network centrality: Betweenness and Eigenvector. We used Eigenvector to filter our top 22. We excluded nodes outside Perth from the centrality ranking table but included Phil Morle on the key nodes page as he ranked within the top five by both.
Health Engine’s recent $10.4m raise and their large online traffic make them a key success story in the startup ecosystem. While technically older than our five year cut off, we’ve included them as the current founders took the reigns in 2010. Here are some of the key milestones, people and companies along Health Engine’s journey.

### Health Engine

Health Engine is founded in 2006 by two emergency doctors Mike Cadogan and Colin Parker as a medical specialist directory with no business model.

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006-2008</td>
<td>Health Engine is founded in 2006 by two emergency doctors Mike Cadogan and Colin Parker as a medical specialist directory with no business model.</td>
</tr>
</tbody>
</table>
| 2009 | January
Marcus Tan forms Future Health Ventures as a vehicle to fund technology companies focused on the health and medical markets – he’s the only General Partner. Marcus ‘hires’ a team of 4 designers and developers including Darius Wey (CIO), an old family friend, Gerard Caulfield (CTO), and Jinnan Cai to work on Popfossa - a platform for medical conferences. Darius and Gerard work for equity. The team work from Marcus’ home and is funded via Marcus’ credit card. |
| 2010 | January
Future Health Ventures invests in Health Engine. Marcus and his Future Health team take over the running of Health Engine. The team focus on expanding the directory to cover all medical specialists. To bring in revenue they offer a “one stop shop” for medical practices, building websites for doctors and listing them on the directory, charging a $55/year listing fee. The team still work from Marcus’ home and cash flow is still managed via Marcus’ credit card. |
| | Mid Year
Adam Yap leaves Calorie King after eight years. He leaves after being COO and VP Consumer Sales, where he began as Mobile Products Manager. Looking for a new venture Adam types in “angel investing, perth medical” into Linkedin. Marcus’ name pops up so he reaches out via Linkedin to connect. They meet shortly after. |
| | November
Adam Yap invests in Future Health and becomes the second General Partner. Joins the Health Engine management team as COO bringing strong ecommerce skills developed while at Calorie King. Traffic begins to grow under Adam’s guidance. |
| | End of Year
30,000 unique visitors and 50,000 page impressions per month. |

**KEY: RELATIONSHIP TYPE**

- #Page Impressions per month.
- #Unique Visitors per month.
- #Published Appointments.
ONWARDS

And upwards.

January
Begin the year still focused on building medical practice websites and charging directory listing fees.

April
Move to office Subiaco.

August
Marcus and Adam see Techcrunch article on Zoedoc’s $50m raise. They start exploring booking appointments as an alternative business model.

September
Start building the functionality to book doctors appointments on Health Engine.

October
They start work on raising an angel round.

Telstra Ventures reaches out after seeing that Health Engine is ranked highly by Nielsen. They stay in touch.

November
Start running tests on the appointment feature - hiding it deep within the site. Marcus calls medical friends to get practices onboard.

Warren Guy introduces Marcus to Andrew Larsen, a potential investor.

When a potential client will only have a website built for her surgery if they build one for her husband’s business, they agree and reluctantly create their first driving school website – it’s the last website built.

December
Within 4 weeks of meeting Andrew they close the deal securing investment from Andrew and Peter Larsen, co-founder of Navitas. The money arrives Christmas eve. It’s Andrew’s first software investment, and he joins the team.

Darius works through Christmas to build an iPhone app for booking appointments.

End of Year
180,000 unique visitors and 400,000 page impressions per month.

14 February
Officially launch the booking service on the front page with 20 practices available.

April
Move to Sync Labs in Leederville, a co-working space for tech startups founded by Marcus and Andrew.

October
With their initial angel round due to run out in December they start trying to raise a series A round of between 2-3m.

Marcus reaches out to east coast corporate advisor Rob Antulov to assist in the raise via LinkedIn.

November
Health Engine is approached by Telstra Ventures and Seven West Media about investing. Telstra and Seven’s corporate team begins due diligence.

End of Year
350,000 unique visitors and 900,000 page impressions per month.

Early 2013
Due diligence draws out and Marcus, Adam and Andrew provide bridge financing to hold the company over while they try to finalise the negotiations.

May
They secure $10.4m in investment (some cash, some in-kind) from Telstra Ventures and Seven West Media. The founding leadership team still retains control of the company.

The new Board includes:
Patt O’Sullivan - Board Chair
prev Chair at NineMSN, CFO at SingTel Optus and Director at both Carsales.com and iSelect
Rohan Lund – Director
COO Seven West Media Group, former CEO Yahoo!7
Matthew Koertge – Director
MD Telstra Ventures
Marcus Tan - CEO and Director
Adam Yap - COO and Director
Andrew Larsen - Board Observer

Move to the West Australian offices.

26 August
2,000+ GP and dentists published nationally; 1,000,000 appointments published; 22,000 iphone app downloads; 480,000 unique visitors and 1,200,000 page impressions per month. 1 booking every 3 minutes.

End of Year
180,000 unique visitors and 400,000 page impressions per month.

$34.7m

Estimate of Health Engine’s current valuation based on the assumption that they sold 33% of the company shares for $10.4m in investment. Series A rounds for tech startups generally range in dilution from 10% to 50%, we split the difference and called it 30%.
COMMUNITY IDEAS

As part of our mapping workshop with key members of the ecosystem we asked people to discuss, develop and rank ideas on how to build Perth’s startup ecosystem. Ideas in order of greatest votes were:

#1. Ecosystem Integration: Perth’s startup ecosystem is spread out and isolated; it needs greater internal collaboration and places to network. Spacecubed, Founder Institute and Startup Weekend are good examples of something that brings the community together.

#2. Publish Hero Stories: to encourage investment, trade sales and more students to startups, there needs to be hero stories and exits. Perth has a growing stable of strong tech companies such as Filtersquad, iCetana and the Inhouse Group, with good valuations, such as Health Engine’s recent $10.4m raise at a $50m+ valuation. However the local media is traditionally focused on sporting heroes, and the mining and resource sector. For investment and people to flow into the ecosystem, attractive hero stories need to be promoted to the wider community. The $50m sale of Chomp, founded by 30-year-old Perth girl Cathy Edwards, to Apple is a great example.

#3. Inspire Young Students: and attract more students to startups. Across Australia, student numbers in computer science are dropping rapidly. While technology firms aren’t made up of only computer geeks (perhaps 50-60%) they do require a core set to develop innovative intellectual property. Israel’s ecosystem is a great example of the benefits of a strong focus on technology (primarily driven by defense force needs). Dash’s work with DCode in Malaysia, StartupAus’ initiative to teach coding and entrepreneurship at schools, and Sam Birmingham’s efforts to bring Startup Weekend to universities are good examples that need to be encouraged if Perth wants to grow a sustainable and vibrant startup ecosystem.

#4. Cross Discipline Collaboration: create opportunities to bring non-tech people and domain specialists together with software developers. YCombinator now prefers to pick startup teams that have three co-founders - a tech specialist, domain specialist and a designer. Innovative tech companies can no longer rely on good technology alone.

#5. Mentors: greater access for startup founders to experienced mentors with experience commercialising intellectual property. Founders Institute is a good example of drawing mentors together in a structured an ongoing way.

#6. De-risk Early Stage Investment: create a well-worn path for mining money to understand startup investment. A good model for this is seed accelerators like YCombinator, Startmate or Nest. Models like this could attract and help guide some of the mining and resource wealth in Perth into the startup ecosystem.

#7. Global Events: interactive startup and entrepreneurship events for the ecosystem and wider community. The Founder Institute, Startup Weekend and oZApp are good examples of events that bring the community together and attract people from other international startup ecosystems.

#8. Talent Attraction: sponsor a high profile residency for a superstar tech entrepreneur to come to Perth for a 1-3 month period to raise the tech ecosystem's profile and educate local entrepreneurs.

#9. Commercialisation Assistance: assistance with market validation, business setup and access to markets. Parallel to government support for local early stage companies securing work within the mining and resource sector. Commercialisation and its case managers are a good example of this, alongside the Founder Institute.
OPPORTUNITIES

In terms of the needs and opportunities for development within the ecosystem we identified nine that build on the previous ideas. There are different stages within the startup lifecycle (discovery/seed/angel, validation/early stage, scale/growth, expansion and exit), some opportunities cross stages (#1), and others are focused on a specific stage (#5). In no particular order:

#1. Building a Creative Cultural City: Richard Florida’s work on the creative class shows that a vibrant, creative and liberal city is critical for the creation of innovative technology companies. Traditional wisdom was that developers went where the work was, research shows the opposite, and the exodus of tech companies from suburban tech parks into inner cities is further evidence of the trend. Perth’s efforts to develop the cultural fabric of the city are critical to growing a startup ecosystem, and the success of Boulder in building a vibrant technology hub within a population of 300,000 shows that it is well within Perth’s reach.

A vibrant city will also go a long way to attracting successful expatriate entrepreneurs back to Perth. We were constantly surprised to discover how many of the key community builders had experience in another tech ecosystem and were drawing on that to help build the local ecosystem. E.g. Jane Garret bringing Cambridge University’s Ignition program to Curtin after working in Cambridge, Larry Lopez bringing his Silicon Valley network to the oZApp Awards and Matt McFarlane establishing Yuuwa after experience investing in tech startups through a European fund. The benefits of beautiful beaches, beers, bars and bands should not be underestimated.

#2. Free Wifi: the capital costs for startups have dramatically decreased. To create another $1 billion Instagram all one needs is 8 very smart people, some laptops, a desk of sorts, money to pay for servers and access to the internet (and a good dose of luck). Providing free wifi throughout the city of Perth would help drop startup costs. Additionally, consumer access to wifi throughout the city would help create innovative new local markets for location, video, and augmented reality mobile applications.

#3. Established Local Firms Re-investing: while there is a decent level of sponsorship and interaction between startups and established firms (particularly tech firms like iiNet), there is plenty of room for stronger relationships. Established companies could consider re-investing in startups through other means than event sponsorship. There are a range of options that provide more value to both parties, particularly equity investment based options that help build a market for local tech, e.g. prize money for equity investment (Qualcomm’s $300k oZApp prize money), company venture funds (Optus Innov8) or internal accelerators (Volkswagen).

#4. Attract Global Technology Companies: taking a page from Israel and the Mayor of New York’s playbook, we think a great win for Perth would be to attract more global tech firms to establish offices in Perth. While early era tech firms like IBM and Microsoft have offices in Perth, operating a web 2.0 tech firm such as Facebook, Google, Samsung or robotics firms, would help talent local, build global connections, and channel foreign money to local shores. Amazon’s local office and support of startup events is a great example, while there is a decent level of sponsorship and interaction between startups and established firms (particularly tech firms like iiNet), there is plenty of room for stronger relationships. Established companies could consider re-investing in startups through other means than event sponsorship. There are a range of options that provide more value to both parties, particularly equity investment based options that help build a market for local tech, e.g. prize money for equity investment (Qualcomm’s $300k oZApp prize money), company venture funds (Optus Innov8) or internal accelerators (Volkswagen).

#5. Seed Funds & Accelerators: perhaps the biggest gap startups discuss is a lack of access to local angel funding (pre venture capital and post friends, family and fools). Perth’s Angel Group is just getting active and the Digital Aurelis network have made few, if any, investments. On the other hand, angels want to de-risk their investments as much as possible. While money is within the wider Perth community, there are few structured ways for angels to invest. Seed Accelerators are great ways to filter startups, provide mentoring, funnel angel investment and in some sense, de-risk tech firms. Perth is yet to see a seed accelerator. A great step forward would be either: a broadly focused accelerator (e.g. YCombinator); one focused on an industry vertical (e.g. Rock Health); or an internal company accelerator (e.g. Nike+). An internal company accelerator within the mining sector is an obvious opportunity: helping the established firm develop low cost technology, and building a local M&A market for startups.

#6. Venture Capital Funds: a big question that came up in our research was “where is the next Yuuwa?” As the only major technology focused venture capital fund in Perth, Yuuwa and Matt McFarlane have played a critical role in developing the ecosystem, however the fund has been fully allocated and there is yet to be another sizable fund to launch in Perth. Without a local source for early stage funding Perth startups will have to seek funding elsewhere and if so it is likely they will have to relocate. It’s also worth noting that these funds don’t have to be purely home grown, in fact it’s often better if they are hybrid. Israel has 70 active venture capital funds, of which 14 are international VCs with Israeli offices. Additionally, there are some 220 international funds, including Accel and Greylock which actively invest in Israel through in-house specialists. Larry Lopez’ work to bring Silicon Valley Bank to Perth during the oZApp Awards are a great example of laying the ground work for attracting US VC firms to our shores.

#7. Connect with East Coast: there is a tremendous amount of work being done to bring east coast companies like Pollenizer, Adventure Capital and Blackbird to Perth. Given Perth’s early stage and the explosion of tech funds and accelerators on the east coast it seems vital that this flow of expertise, experience and investment from our eastern brothers and sisters continues. As relationships with the Asian and US market are more established on the east coast, connecting with Sydney or Melbourne is often a useful stepping stone to global markets.

#8. Connect with Silicon Valley: there is a big trend to attempt to emulate Silicon Valley and there is another to try to go it alone. A better approach to emulate seems to be Israel’s. Israel has similar challenges to Australia: a young country, small population, little access to global markets and geographic isolation. However over the past three decades, Israel has developed a non-existent startup ecosystem into the best in the world (by per capita measures). Israel’s approach has been to develop strong ties to the Valley; attract US tech firms to establish R&D offices; attract substantial US funding in Israeli startups; and then sell those back to US firms for $20-$50m sized exits. The Valley is the biggest global tech cluster, and generally at some point it plays a part in growing the worlds leading tech companies – it’s obviously worthwhile to embrace this.

#9. Connect with Asia: our proximity to Asia, time zone sharing, strong network ties, and the size and growth of the Asian market present several opportunities for building technology that appeals to the Asian consumer, enterprise or trade market. The undervalued nature of local startups is also attractive for trade sales into Asia. Continuing to develop strong network ties with Asia will be critical to building both user and M&A markets for local startups.
A FEW LAST THOUGHTS

Perth’s startup ecosystem is much like a startup: in its early stage of growth, with lots of energy and limited resources. In comparison to other Australian ecosystems, and given it’s stage of growth (several years behind Melbourne and Sydney) it does appear to be doing well relatively well, however compared to international tech hubs like Boulder and Tel Aviv there is plenty of room to grow.

Developing the cultural fabric of the city, hero stories, establishing seed accelerators that de-risk startup investment and funnel angel money from the resource sector to startups, are all critical next steps at the seed stage of the startup lifecycle. Beyond the seed phase, startups need access to growth funding through local venture capital funds; if that doesn’t occur we will see local startups become US or east coast firms. For exits, an M&A market for startups needs to be developed both locally, through greater engagement with established local firms, and by continuing to develop strong network ties with Silicon Valley and Asia.

While many within the tech startup community bemoan the role government plays in developing the ecosystem, our data shows quite clearly the central role government plays within the local ecosystem, particularly in facilitating funding opportunities.

Commercialisation Australia’s $12.6m in grants (18% of the total available fund pool of $70m) helped to attract an additional $12.6m of private and venture capital funding. Yuuwa is also matched funded through the Federal Government’s Innovation Investment Fund (based on half the fund allocated to digital $20m, that’s half from IIF - $10m or 14% of total funds). Yuuwa then co-invested with CA in 2 of its 3 digital deals. Together with the Department of Commerce’s innovation grants ($10m or 14% of total funds), that makes a total of $32.6m or 46% of the total funding pool derived from government sources. Additionally of the top ten raises by value only two did not include matched funding - Health Engine and Virtual Gaming World. Government funds attracted $32.6m in co-investment, and it’s difficult to say whether the same $32.6m would still be drawn into the ecosystem without the filtering and de-risking that CA in particular does.

While our data is obviously skewed towards what was publicly available, even if we add another $30m in undisclosed funding to the total funding pool, a third of the pool is still government funded and another third match funded by private and VC sources. Given that changes are afoot both for the state and federal government it’s critical that the matched funding is maintained while the tech startup ecosystem is in such early stages. Healthy exits are obviously needed to create a sustainable ecosystem, but Health Engine and HiSeis are tantalisingly close to proving this out.

We hope this report will help plant a few seeds and increase people’s awareness of the tremendous opportunities within the ecosystem.

Thank you again for everyone’s help in producing the report and ecosystem map.

CONCLUSION
The Health Engine story as a network of relationships.

**KEY: RELATIONSHIP TYPE**
- Founder, Director or Organiser
- Employee or Former Employee
- Knows, Connected, Intro’d, Read
- Investment or Sponsorship
- Mentor or Judge
- Located at
REFERENCES

References and further reading.

REFERENCES BY PAGE

About: Every new company is a ‘startup’ but in the great cultural tradition of appropriation the digital and internet technology community have appropriated the word ‘startup’ to signify a ‘technology startup’. We have followed suited and are basing our definition of ‘startup’ around that used by the Startup Aus group lead by the guys at Google Australia and PWC: www.startupaus.blogspot.com.au

Organisations: List of organisations based on community workshops, interviews and internet research (outlined in more detail below).

Statistics: Data source for Company related graphs was LinkedIn.com, restricted to “technology” companies within 50km of Perth. Data source for People related graphs was LinkedIn.com, restricted to people associated with the above set of ‘Perth’ companies.


Funding Flow: Relationship data was based on the Funding data plus additional searches of LinkedIn.com.

Groups and Incubation: Data sources for Groups and Incubation network graph and statistics were: interviews with Sam Birmingham, Brodie McCulloch, Claire Roberston, Dash Dhakshinamoorthy, Jane Garret, Phil Kemp, Marcus Tan, Marcus Holmes and Sheryl Frame. Data source for Meetup Group relationships was Meetup.com, restricted to “technology” and “entrepreneurship” related groups within 50km of Perth. We also manually sourced data from the following sites: www.perth.startupweekend.org, www.fi.co/mentors?target=Perth, www.witwa.org.au

Key Nodes and Centrality: The network graph was created by aggregating the above relationship data then filtering by the centrality algorithms described on the Centrality page to identify the most key nodes. Additionally we included and key nodes one degree removed.


Ideas: Suggestions and voting for priority was taken from our community workshop with: Andrew Larsen, Ankur Sharda, Brodie McCulloch, Charlie Cunningham, Chris Farquhar, Damien Blythe, Darcy Laycock, Dash Dhakshinamoorthy, Graeme Speak, Greg Riebe, Isaac Dury, James Bromberger, Jay Whiting, Jim Wyatt, Justin Strharsky, Linh Le, Luis Puig, Marcus Holmes, Marcus Tan, Matt Edwards, Mike Kruger and Sam Birmingham.


ECOSYSTEM REPORTS


“Transformational Entrepreneurship” published by Startup Compass: blog.startupcompass.co/pages/transformational-entrepreneurship-appendix


Jonah Cacioppe and Mike Kruger are the co-founders of Boundlss and Floq surveys. They’re working on predicting team and company performance using social, communication and movement data. If you’d like to map your ecosystem email us at jonah@boundlss.com For a copy of the report or to see the interactive map of the ecosystem visit: startup.boundlss.com