



Energy for
generations

X_Site

@



The Highlights of 2016



Foreword

The energy sector is undergoing **profound change and disruption**, at a pace and to a degree like never experienced before. The requirement for ESB to **innovate**, whether in ways **to make us more competitive and effective** in all the things that we do really well for our customers today, or in the **establishment of new services and businesses** that will grow our company over the coming years, has never been more pressing.

X_Site, ESB's first Innovation Hub at Dogpatch Labs, was established as a safe environment where **new service or business concepts can be explored and validated with potential customers**, and developed into services that they will be prepared to pay for.

At X_Site we are establishing an **innovation eco-system** that engages with the **wider startup community**, so as to learn from their experiences and to apply the same customer centric and agile techniques that today's most successful "new" companies use in growing their businesses. X_Site, a **visible symbol of culture change** for ESB, also provides an environment for disruptive thinking and the enhancement of our innovation capabilities.

This report provides a synopsis of the many innovation initiatives that have taken place during the first year of X_Site @ Dogpatch Labs. If you want to learn more about the X_Site innovation eco-system, or any of the innovative projects based there, please feel free to contact me or any member of the X_Site team.



Paul Mulvaney, Executive Director Innovation, ESB



Dogpatch Labs has, over the last two years, become a **central pillar of Ireland's tech and startup community**, an achievement made possible through working closely with key partners Google, Ulster Bank, Pivotal Labs and all the members of the Dogpatch community.

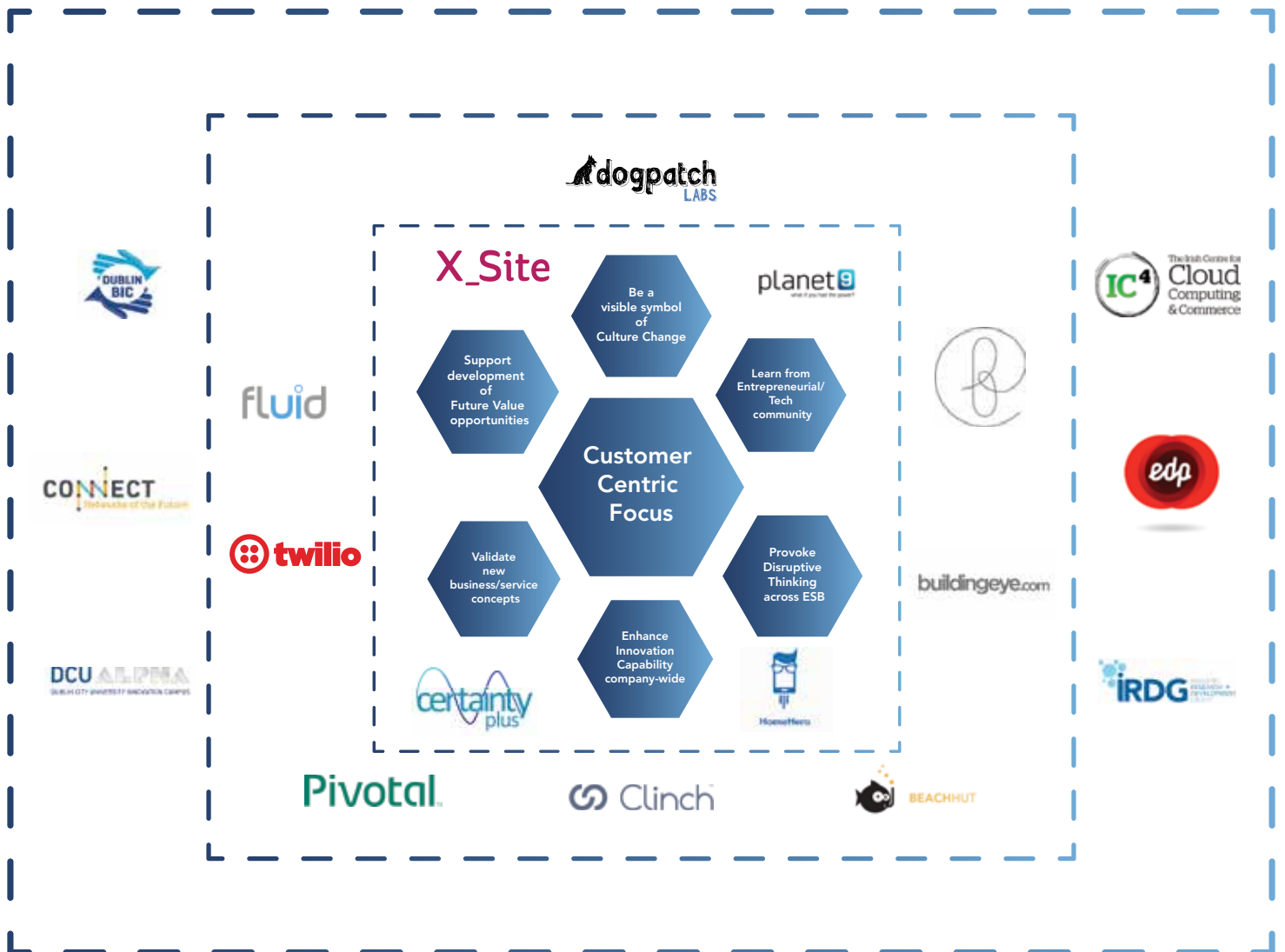
Dogpatch Labs is especially delighted to welcome ESB into its environment and recognizes ESB's innovation history and strengths in areas such as technology innovation, telecommunication services, energy management and across the wider footprint of smart cities.



Patrick Walsh, Managing Director Dogpatch Labs



X_Site Ecosystem @ Dogpatch



Introduction to X_Site

The energy sector is undergoing significant **change**. Traditional players are being disrupted by **new companies** which are offering **new products and services** that meet **customers' changing preferences** and requirements, underpinned by **new business models** and enabled by **emerging technologies**.

This disruption was a key driver in the establishment by ESB of its first off-site innovation hub, X_Site @ Dogpatch Labs. The concept of establishing an environment, where new business ideas could be rapidly validated with real customers and transformed into new service offerings and businesses for ESB, follows best practice in other sectors.

X_Site was established at start 2016 with a number of overlapping objectives:

- Provide an environment for [validation of new business opportunities](#) and new service concepts;
- Position ESB to [learn from the wider startup community](#) and the fast moving technology sector;
- Provoke [disruptive thinking](#) across ESB;
- Support the development of [future value](#) opportunities for ESB;
- Enhance the [innovation capability](#) of the organisation;
- Act as a visible [symbol of culture change](#) across the company;
- Position the [customer](#) as central to ESB's innovation cycle;

The projects being run from X_Site have each been designed around the customer. The core value propositions aim to resolve real problems that potential customers of our new services face.

[Insights](#) gleaned from how the early stage products and services are being used by potential customers provide direction for enhancements in subsequent iterations of each product or service. Using this [low risk approach](#), customer learnings inform us as to the [market validity](#) of our ideas.

[Proximity](#) to other startup companies in the Dogpatch co-working environment enables easy sharing of learnings and techniques, which is helping to drive innovation [agility](#) across our project teams. ESB is also starting to interact with technology "meet-up" and "startup" groups, who use Dogpatch Labs as a meeting venue for their communities. This is helping to raise awareness of emerging technologies, methodologies and business models across both the X_Site project teams and the wider ESB organisation, and possibly giving rise to further innovations over time.

X_Site teams are also encouraged and supported in gaining access to experienced [entrepreneurs](#) and [mentors](#) in the wider innovation eco-system outside ESB. These mentors can provide advice to help validate core business propositions and to develop ESB startups from concepts into new businesses.

"We are already seeing the benefits of X_Site being located at Dogpatch Labs and using an agile customer-centric approach in new service development. Advice from start-ups at Dogpatch, on how to engage with potential customers and determine insights into required modifications for new versions of our offerings, is paying off. Our beta versions of new service products are constantly improving and engagement levels across new markets are increasing."

Shane Hogan, New Business Development, Home Hero

Profiling X_Site's Initial Projects

The two initial projects, Planet9, a technology business that aims to sell electricity in the UK, and Home Hero, an intermediary business between the end consumer and the energy supply companies in the UK are growing in X_Site. Both have made big strides since their inception in early 2016.

Planet9 Energy



This startup aims to **disrupt** the UK energy supply market. Planet9 identified the inflexibility of and lack of transparency by the UK big energy suppliers, in terms of customer offerings and subsequent charging & billing to large energy customers, as an **opportunity** where ESB could revolutionize service and provide enhanced **control** to (initially) those large UK energy consumers.

"The Planet9 project has heightened ESB's technical competence in areas such as cloud computing, data analytics and agile delivery as well as providing best-in-class marketing practice capability," Peter Murphy, Manager, Planet9 Energy explains. "In addition, by leveraging ESB's collaboration with a Novusmodus investee company (Endeco Technologies), which provides enhanced flexibility services and control to large energy users in the UK, this will provide the new Planet9 business a route to market to offer flexible tariffs and enhanced customer services to these large energy users. In this way, Planet9's business model can provide an outlet for some of ESB's generation from Carrington and our GB Wind Farms while also enhancing the reputation of both Planet9 and Endeco in a very competitive market."





HomeHero

Home Hero

After a period of engagement and interaction with potential customers across the UK the original business concept (Sameboat) was **restructured** into Home Hero: a digital concierge, initially providing Energy Supplier advice to customers in the GB market.

“Sameboat has delivered invaluable **learning** to ESB from the perspective of how to develop **customer focused** and disruptive business models in a **low risk** manner, as well as a first-in- sector prototype of an Artificial Intelligence based “chatbot” to support the switching process in the UK supplier market” says Colm Moriarty, Manager of the Home Hero project. Chatbot technology and services will disrupt some of today’s established customer service and marketing channels and could have considerable **impact** for both internal and external services across ESB Group.”

Certainty Plus



Since September 2016, Electric Ireland’s business markets’ team has been leading a project in X_Site to develop and market-test a new customer facing product called Certainty Plus.

The **idea** for Certainty Plus was **born at an innovation workshop** at X_Site in April 2016. A twelve-week project, to bring an **MVP** (Minimum Viable Product) to market and have 100 customers signed up for a 12-month period, was approved by the Electric Ireland senior management team.

Geraldine Moloney, SME Customer Strategy Manager in Electric Ireland, who is leading the Certainty Plus project explains that they are “**trailing** the product with our smaller business customers at present. Their feedback and inputs will be used to further develop the product before a decision is made regarding full market launch. This product is a subscription based electricity model where a customer pays a fixed amount each month for his or her electricity consumption. This offers the customer benefits of simplicity of electricity pricing and also gives certainty of cost for electricity on a month to month basis, removing any bill shock potential. The product is a **digital** only product, with customers self-managing through an online portal.”



ESB Integrating into the Dogpatch Labs tech ecosystem

Sponsorship of Innovation Events and Meetup Groups at Dogpatch Labs

ESB has supported a number of Grassroots [Tech Community](#) events at Dogpatch Labs, including InventFest in January, where hardware innovations with a strong tech element were showcased. ESB also sponsored Code for Ireland where civic-minded individuals collaborate to develop innovative and sustainable solutions to real world problems faced by communities across Ireland.

ESB also sponsored a series of 5 [meetups](#) throughout November for the AI & Robotics Group. The series was designed to heighten understanding, (through building a simple robot), of robotics technologies and to [spark imagination](#) of some ESB participants on the application of these techniques when solving challenges facing our business or our customers.

“ESB participants at this workshop series learned a lot from it, whether in terms of software coding, electronics or the application of robotics and artificial intelligence in solving real technical challenges.”

Ger Keenaghan, Smart Energy Services

Home Hero

The Home Hero project has benefited in multiples ways from being based in X_Site @ Dogpatch Labs. Home Hero has also used members of the Dogpatch Labs community to perform user testing of beta versions of its software and has received [coaching and mentoring](#) from other Dogpatch companies.

Finding really good technical resources, whether software developers, UX experts or copywriters is simple when you are connected to the technology community. Referrals from other startups ensures that you are put in contact with the best technology people to drive your project forward. "

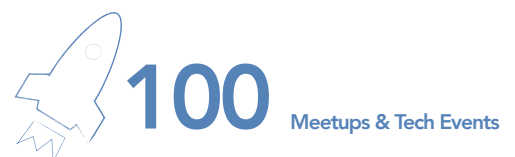
Colm Moriarty, Founder, Home Hero

Planet 9 Energy

Planet 9 has [engaged](#) extensively [with other start-up companies](#) at Dogpatch Labs. In doing so, some of the early days' challenges that Planet 9 faced were alleviated. The advice of companies such as Fluid, Pivotal Labs, Buildingeye, Beachhut PR and Clinch were gratefully received as they helped the Planet 9 team [identify the way forward](#) on a number of challenges such as user-interface & technology design, data management, PR/marketing and human resources. In addition access to locally developed software, such as Viddyad, has helped Planet 9 create and publish their marketing videos extremely fast.

Peter Murphy from Planet 9 Energy sums the whole co-working environment experience up when he says that *"you get to meet inspirational and energetic people at Dogpatch Labs and that is why I love working here."*

Dogpatch Labs in Numbers



Culture & Capability Building

One of the key pillars of our Innovation Strategy centres on further strengthening ESB's innovation capability and tapping into the innovation talents that are evident right across the company.

At X_Site, through the growing relationship that we have with Dogpatch Labs and the wider innovation community, we are focusing on building the **entrepreneurial capabilities** of our People, to provide the **skills, confidence and determination** necessary to test out new business opportunities and establish ESB's own startups.

At an **organisational** level and partly based on the experience of projects at X_Site, we have been refining our **governance** arrangements, decision making criteria, resourcing strategies and procurement procedures, to make them fit for purpose when considering **disruptive** or radical innovation projects and associated new business opportunities in new market segments.

X_Site is a **visible and tangible symbol of culture change for ESB**. In addition to the innovative ideas and business opportunities that are being developed here, ESB is using X_Site as an environment for disruptive thinking and the sharing of new innovation techniques across the company. At the end of its first year, there has been heightened interest in X_Site from all Business Units across ESB and a **pipeline of new business opportunities** is beginning to emerge.

1 Entrepreneurial conditioning programme, with 12 participants

6 Design Thinking workshops with over 120 participants

40 Participants @ Storyboard training workshop

3 Disruptive Thinking Workshops, with over 125 participants



25 "Training Ideas" giving rise to 1 new X_Site project

5 Business Model Canvas workshops held, with 2 concepts approved to full business case stage



Internal Innovation Mentor network established with

12 initial members



External entrepreneur / mentor panel established with

5 new business projects availing of mentoring services

Design Thinking Workshops with cross-company teams, Sept 2016



The X_Site team has been introducing People from right across the company to the principles and techniques within the Design Thinking framework.

Design Thinking is a customer-focused problem solving methodology which encourages participants to consider problems or innovation opportunities from the [customer's perspective](#), and to develop ideas and potential solutions based on those insights.

Innovation Workshop - Platform Plays, Ecosystems & APIs, April 2016



X_Site hosted a workshop which introduced over 50 attendees to the concepts of [Open and Collaborative Innovation](#), enabled through APIs (Application Programming Interfaces) and shared communication protocols.

External speakers from academia such as IC4 in DCU and emerging startups such as Currency Fair shared insights to the [Sharing Economy](#), prompting discussion around how these concepts are beginning to disrupt the energy sector.

Augmented & Virtual Reality Innovation Expo & Workshop, July 2016

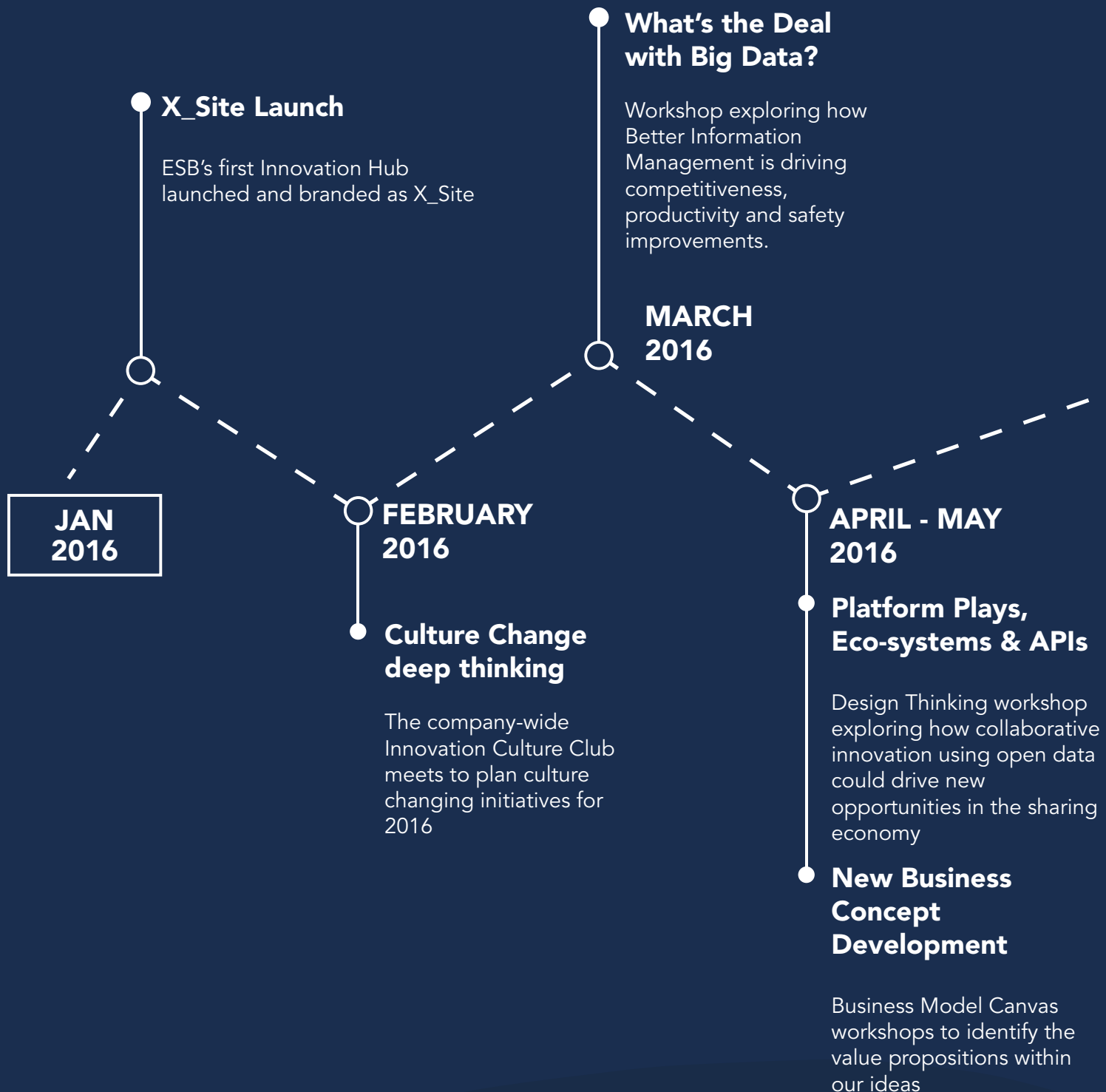


X_Site curated and hosted a highly successful workshop and expo which focused on [Augmented and Virtual Reality](#). External speakers from industry leaders including [Microsoft](#), [Samsung](#) and [Daqri](#) shared insights into how these technologies are transforming every industry: from marketing to retail and from manufacturing to field based operations.

Attendees were provided the opportunity to experience the latest technologies and consider how these technologies could drive innovation across the company.

Culture & Capability Building

timeline



● **Disruptive Thinking, outreach**

Sharing disruption trends from other industries in order to encourage innovation in our business.

● **AR & VR Workshop & Expo**

ESB staff are wowed by the potential of Augmented Reality & Virtual Reality technologies

○ **JUNE - JULY 2016**

● **Design Thinking Immersion event**

Further building the skills and capabilities of our people by putting the customer central to an innovation mind-set

● **Launch of Certainty+ Project**

Electric Ireland launches Certainty + Project at X_Site, demonstrating that X_Site is for all of ESB

○ **SEPTEMBER 2016**

○ **AUGUST 2016**

● **A Great Company to work for**

Undergraduates hear how exciting the future is for ESB and understand the role of X_Site in helping deliver on our innovation ambition

○ **OCT - NOV 2016**

● **Innovation Mentor Network established**

To help staff members move their new product, service or business ideas forward.

● **Tackling real business problems**

Applying customer-focused thinking to find ways of solving ESB challenges

Collaboration

Collaboration is becoming increasingly important for ESB as the pace of change and disruption, in the sectors in which we operate, intensifies.

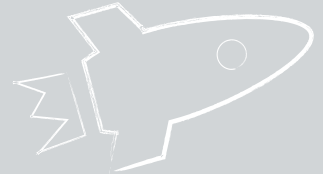
X_Site being physically located in the Dogpatch Labs co-working environment, provides a simple and [fast path to engagement](#) with other locally based tech startups. The close working proximity has given teams based in X_Site insights into tools and techniques that these agile companies use, some of which have already been effectively deployed across project teams.

The innovation eco-system, centred around Dogpatch Labs and beyond provides significant collaboration and innovation opportunity for ESB. Many startup communities and meet-up groups use the Dogpatch Labs facilities to host their regular information sharing, learning and collaborative action events. Exposure to and engagement with these communities provides insights and understanding into [emerging technologies](#) and [business models](#) and how these could apply to ESB or potential customers.

ESB also believes in the power of collaborating with the wider external community to develop [sustainable](#) and innovative solutions for a [low carbon future](#). In October 2016, ESB held the "Big Energy Hack" to do just that. As Paul Mulvaney, Executive Director, ESB Innovation says, "A hackathon is a great way of exploring innovative solutions by breaking down walls and [tapping into the collective intelligence](#) out there. It is also an innovative way of working – an aspect that is extremely important for us at ESB as we steer our company on the path of innovation to find and create the solutions of tomorrow."

4 Startup/Meetup Groups Sponsored

1 Invent Fest sponsored



4 ESB staff participated at Lego Serious Play workshop

5 Innovation Staff participate at Artificial Intelligence & Robotics workshop series

1st Energy Hackathon in Ireland

140 registered hackers

33 opening pitches

10 teams in the final



ESB sponsors AI & Robotics Meetup Group, Oct 2016

ESB sponsored a series of 4 workshops of this new “Artificial Intelligence & Robotics” meetup group.

A number of ESB staff participated with the objective of learning more about robotics technologies and hopefully to **spark their imaginations** as to how robotics could be applied to either enhance previous innovations for our customers or resolve new technical problems facing the business.

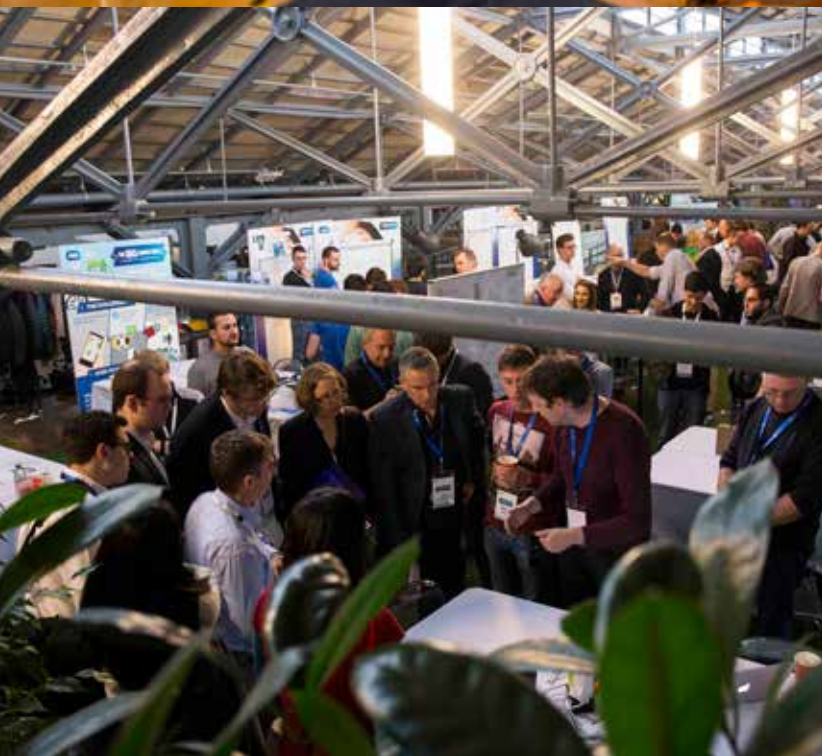


ESB sponsors Lego Serious Play - Lean Workshop, July 2016

ESB sponsored a Lego Serious Play event at Dogpatch Labs, at which a number of ESB staff were part of the wider participant group.

Lego Serious Play is an innovative methodology designed to enhance innovation and business performance.

The Lego toolkit, provides a creative **medium** for participants **to look for new insights** and opportunities and to communicate their ideas effectively.

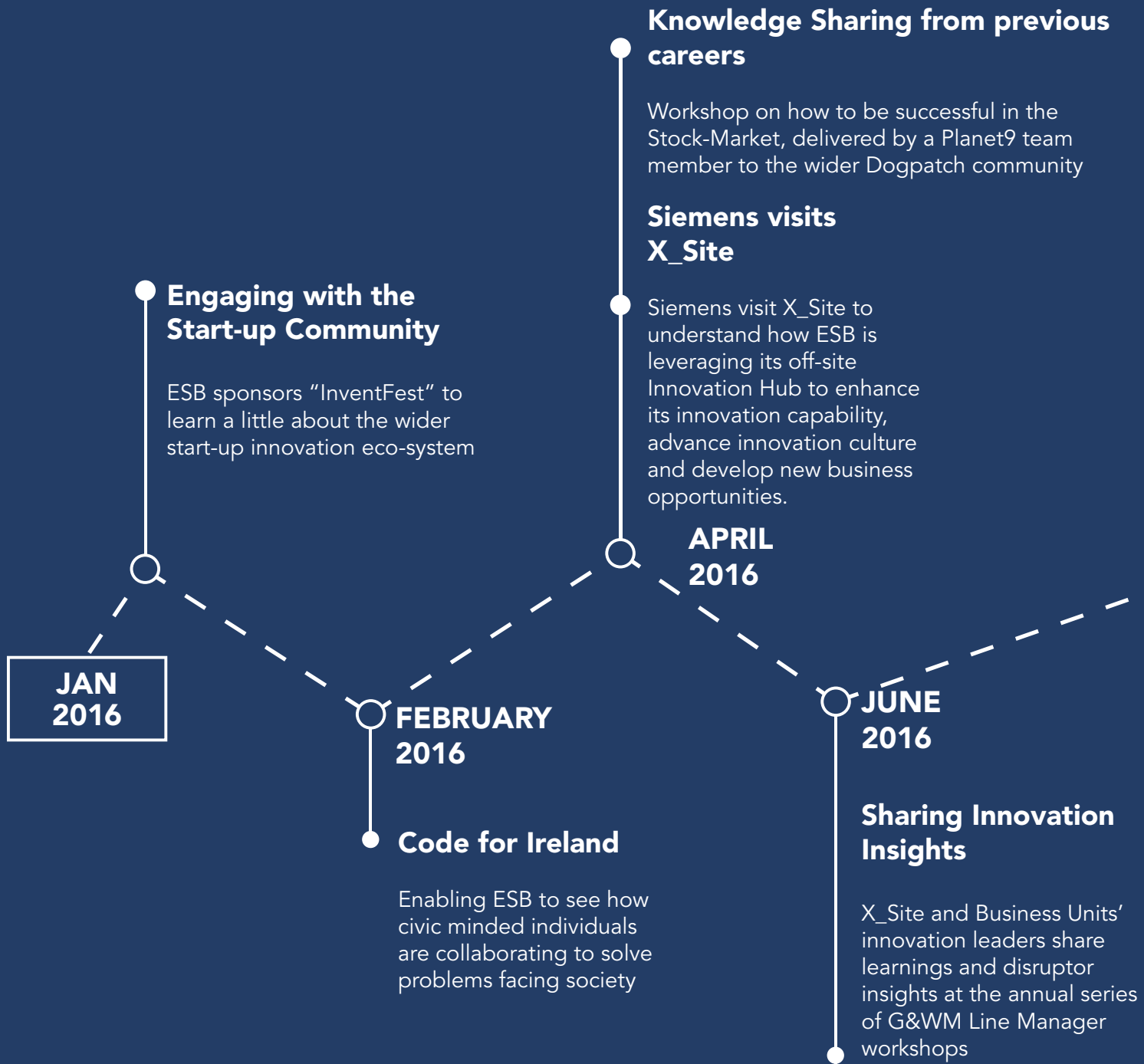


Big Energy Hack Hackathon, Oct 2016

ESB held its Big Energy Hack at Dogpatch Labs over the weekend of 21-23 Oct 2016.

Over 140 participants from **diverse** backgrounds and industries took part and teams developed ideas focusing on 3 challenges. In addition to the great ideas that were shared at the event, the Hackathon was another **visible symbol** both to the external world and to internal staff, that ESB is fully **supportive of innovation** and sees the future-value that initiatives like the Big Energy Hack can generate for the company.

Collaboration timeline



Learning from Financial Services sector

X_Site meets Ulster Bank to discuss opportunities for fin tech disruption to transcend into ESB's traditional value sectors

**JULY
2016**

Big Energy Hack

ESB's first hackathon, the Big Energy Hack, is hosted at Dogpatch Labs and focuses on opportunities in the energy industry.

Robotics Meet-Up Group

ESB staff are introduced to Artificial Intelligence and Robotics technologies, to spark their imaginations

**OCTOBER
2016**

**SEPTEMBER
2016**

Ocean Power Innovation Network launched

ESB hosts the inaugural meeting of the Ocean Power Innovation Network at the newly opened Urban Garden at Dogpatch Labs

RTE France, visit to X_Site

The France Transmission System Operator visits Ireland to understand how X_Site is driving value for ESB

**NOV
2016**

eCars Design Thinking workshop

A mix of internal and external driver enthusiasts collaborate to innovate for the eCars business at X_Site

Enabling Techniques & Technologies

X_Site projects are embracing the principles of [Lean Startup & Design Thinking](#) and are following agile approaches for project management, communications, software development and user testing. These techniques help keep team resources [highly motivated](#) as deliverables are quickly shared with users and their fast feedback provides insights for subsequent versions of products and services.

Teams are using a combination of stand-up meetings and visual project boards to minimise the time spent sharing information, to ensure [focus](#) on critical project activities and to help solve project challenges as they arise.

The dynamic mix of startup companies at Dogpatch Labs, from the PR & Marketing, HR, Technology and Social Entrepreneurship disciplines mean that X_Site project teams can keep abreast of latest technology developments in key areas and ensure that [right practice techniques](#) for their projects are being followed.

X_Site startup projects have also been successful at sourcing service providers to develop digital content such as animated video and project logos at a fast pace and at startup prices. Similar commercial offers are typically not readily available to large corporate organisations.

The presence of [experienced entrepreneurs](#), as well as members of ESB's external innovation mentor panel, at X_Site, means that when [startup challenges](#) arise, there is someone available to advise on a way forward for the project. As Chris Mooney of the Certainty Plus project puts it, "Access to local mentors and entrepreneurs is really helpful, particularly during those challenging times when you meet obstacles to delivering something you are so passionate about and get disheartened. Talking through your challenges calmly with the mentor can help you plot a new path forward and renews [confidence](#) in your idea and self-belief."

planet9
what if you had the power?



120+

Standup Meetings



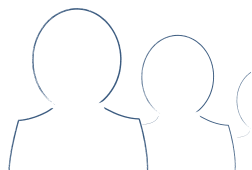
4

digital concierge service lines explored



250

Blog Members



users of digital concierge services

4,000+

3



digital marketing channels

Blog posts

8

61

Vlog posts

text-based energy switching service in the UK

1st

X_Site Projects share Agile Techniques at Lunch & Learn, July 2016

X_Site hosted a “Lunch & Learn” for approx. 80 ESB staff, to **share learnings and experience** of the initial projects at X_Site and to **encourage Business Units to use the innovation hub** and supporting innovation eco-system to advance their new business or new service projects.

At the event staff learned how Planet 9 Energy and Sameboat / Home Hero project teams follow principles of Design Thinking and Lean StartUp by engaging early with potential customers and refining business

Exploring “Chatbot” technology to drive disruptive innovation, September 2016

After a period of engagement and interaction with potential customers across the UK the original Sameboat business concept was restructured into Home Hero: a virtual assistant for Home Energy Advice to lead to lower energy bills and lower carbon usage.

“Home Hero has delivered invaluable learning to ESB from the perspective of how to develop customer focused and **disruptive** business models in a **low risk manner**,” says Colm Moriarty, Manager of the Home Hero project.

Visualisation & Image Recognition , November 2016

Visualisation and Image Recognition technologies are now common place in many sectors. The Augmented Reality expo introduced ESB staff to some visualisation technology solutions emerging in the energy sector. Early **exploration** by the Home Hero team at X_Site, into how visualisation and image recognition can enhance their virtual assistant services, is **showing potential**.

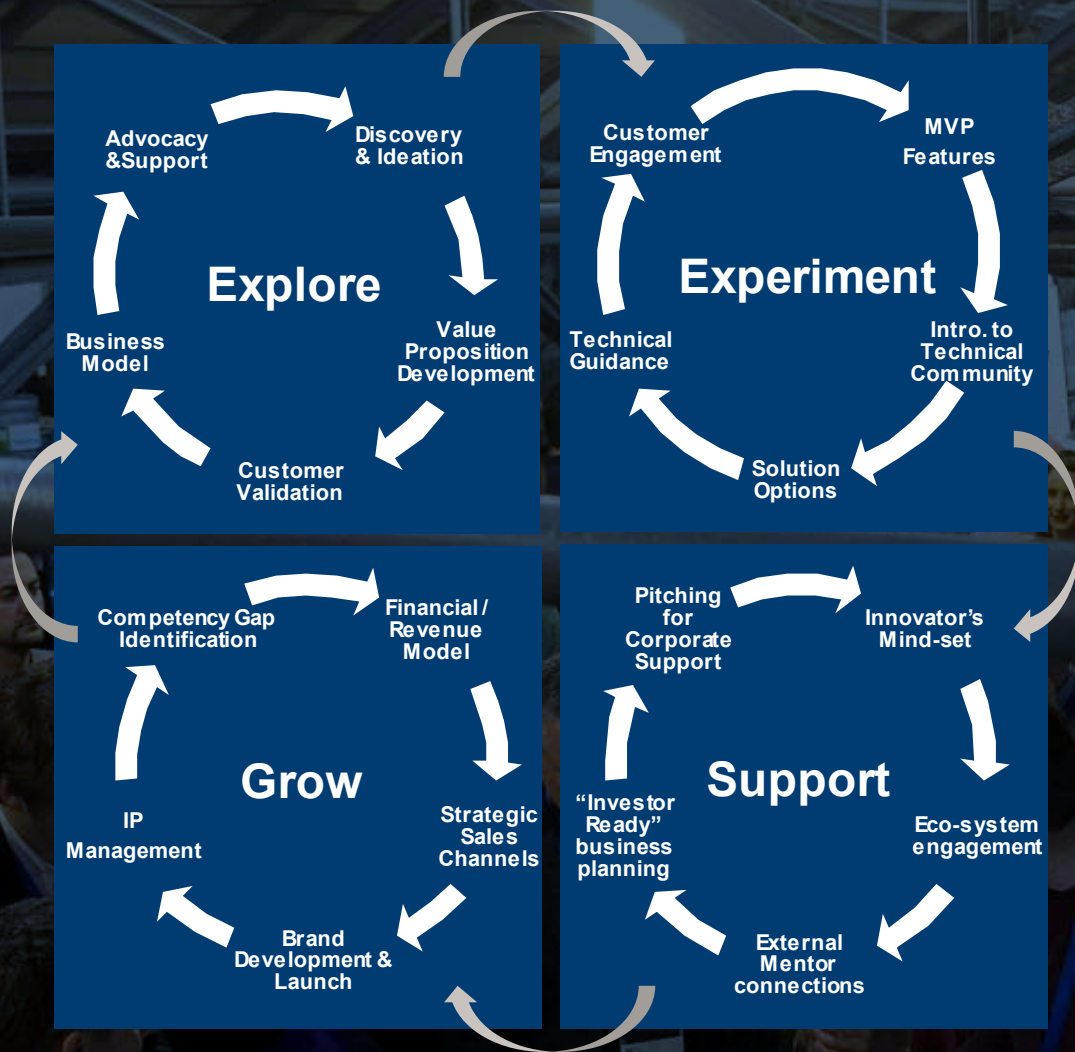
“We can leverage the co-location of X_Site in Dogpatch Labs to **learn from local startups** on the applicability of emerging technologies to support our new products and services.” says Shane Hogan of Home Hero.



HomeHero



How X_Site can help your business



Further Information

If you think that the X_Site team could help you, in any way, to deliver your business idea, then we would really like to hear from you.

For further information on the X_Site innovation eco-system, any of the techniques or initiatives highlighted in this report, or if you are interested in any of the other initiatives aimed at enhancing the wider culture of innovation across ESB, please contact Fergal. Egan@esb.ie or 087-4190976.