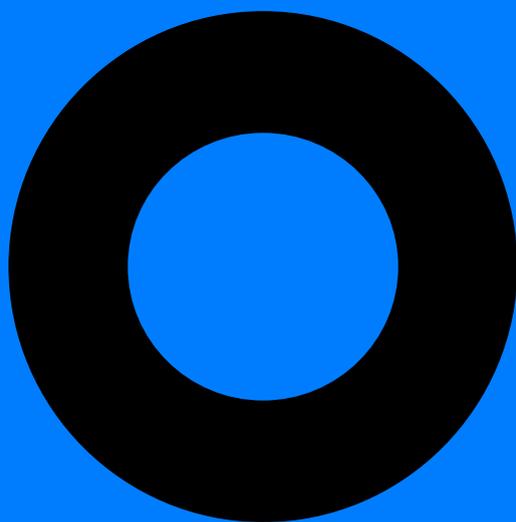# Evaluation of SIDN Fund's first three years

SIDNfonds

Introduction

The internet is an integral part of modern society. It is a universal feature of almost every aspect of daily life. What makes the internet so special is the enormous scope it offers for new applications with both economic and social value.

However, dependency on the internet is a source of vulnerability. With all the benefits come phenomena such as phishing, fake news and cybercrime. It is therefore important to strive for an open, free and trustworthy internet, whose users are skilled and empowered. So that everyone can continue to benefit from the internet to the full. SIDN Fund pursues that goal by providing financial support to innovative internet projects with social added value.

The Fund made its first call for project proposals in 2015. Since then, nearly 150 projects have get up and running with support from the Fund. Three years on, it is appropriate to reflect on what has been achieved so far. Is SIDN Fund realising its objectives? To answer that question, the Fund has undertaken a detailed evaluation.

"SIDN Fund supports projects that make a difference and don't necessarily have alternative sources of funding. By providing support at an early stage, we have contributed to the launch of projects which can ultimately help make the internet stronger and better for the community."
Valerie Frissen, CEO of SIDN Fund.

For the evaluation, the Fund has used the project data at its disposal, plus information collected in a survey of projects that had been concluded or were nearing completion in 2017. The findings of a 2017 satisfaction survey of all supported projects were also taken into account. A draft of the evaluation report was then discussed with the Fund's stakeholders. The report was subsequently revised to reflect feedback from stakeholders and the updated version discussed first with the Fund's Board of Governors and Advisory Panel, and finally with SIDN's CEO and Supervisory Board.

This publication is a summarised version of the evaluation report, setting out the key findings with regard to SIDN Fund's first three years.

About SIDN Fund

SIDN Fund was established on 7 May 2014 by SIDN (the Netherlands Foundation for Internet Domain Name Registration, whose responsibilities include administering the .nl internet domain).
SIDN Fund is an organisationally and legally independent entity, with full control over the resources at its disposal. The Fund is a non-profit foundation whose aim is to contribute to enhancement of the internet's value to the community.

SIDN Fund's mission is to help build a strong internet for everyone. That mission is translated into three objectives: reinforcement of the internet itself, the empowerment of internet users and the promotion of Tech for Good (smart and innovative use of the internet to achieve social impact).

Two funding rounds per year
Each year, SIDN Fund has two rounds of funding. Each round involves an open call for proposals, where proposers are invited to apply for funding for projects that support one or more of the three objectives set out above. Since 2017, each round has had

a theme, with project proposals relating to that theme explicitly encouraged. The themes are chosen to reflect topical internet-related issues, particularly developments that are expected to have major social impact. Thus, 2017's themes were Blockchain for Good (round 1) and Privacy AND Security (round 2).

Over the three years since the Fund began operations, an effective project application, assessment and evaluation procedure has been developed. A 'lean and mean' approach has been adopted, designed to efficiently garner sufficient information for critical project monitoring and appraisal. Procedures are relatively light and the bureau's involvement with the projects is personal and critical. The satisfaction survey conducted in 2017 found that project organisers were very positive about the approach.

Pioneer Projects: the test bed for idea development
Pioneer Projects form SIDN Fund's test bed. Early-stage initiatives aimed at the development of a bright idea into a proof of concept, demo, pilot or experimental design can apply to SIDN Fund for a Pioneer Grant of up to €10,000. The availability of Pioneer Grants ensures that support from SIDN Fund is accessible not only to large organisations, but also to young innovators and individuals with promising ideas. Support for clever ideas through the early stages of development distinguishes SIDN Fund sharply from other (technology-focused) financiers. The policy enables SIDN Fund to build its own innovative community.

Potential Projects: towards a sustainable growth model

Projects that are further along the development pathway and have demonstrated true potential can apply for a Potential Grant of up to €75,000. Such grants enable promising, proven concepts to be scaled up or developed to the next stage, and facilitate the translation of research results into functional applications. When assessing projects, particular attention is paid to the prospects for sustainable further development.

Expert advice

The Advisory Panel plays an important role in the Fund's activities. The Panel advises the Fund's Board of Governors on the selection of projects. It has a core membership of roughly twenty leading experts and representatives of the Dutch internet community, including start-ups and large corporations, professors, investors, registrars and NGOs. Where necessary, additional expertise is seconded on an ad hoc basis. In 2017, for example, two blockchain experts temporarily joined the Panel to help with the blockchain-themed funding round. The Advisory Panel is chaired HRH Prince Constantijn of Orange and Roxane van Iperen. The Advisory Panel's recommendations are submitted to the Fund's Board of Governors, which has ultimate responsibility for funding decisions.

Promoting collaboration and research

As well as making grants available to Pioneer Projects and Potential Projects, the Fund supports collaborative projects, academic research and an annual Internet Thesis Award. Collaborative projects are initiatives linked to the Fund's priority themes, in the context of which the Fund promotes collaboration and ties between the various actors in order the maximise impact. In the first three years, the Fund has worked with Stichting CodeUur/FutureNL on the themes of programming in education and embedding digital skills in education. In 2017, three academic research projects were supported.

"Since its formation, SIDN Fund has developed into a professional organisation with an excellent track record. The supported projects are now yielding tangible results and their value to the community is winning increasing recognition. That is reflected in, for example, the large number of proposals and award nominations and the growing media interest in the projects" Eddy Schuyer, Chair of the SIDN Fund

SIDN Fund has also teamed up with Google, Brinkhof Advocaten, Greenhost and the Royal Holland Society of Sciences and Humanities to launch the Internet Thesis Awards. Each year, four awards are made, with SIDN Fund supporting the award for the best thesis in the category Internet & Society.

Knowledge-sharing
With a view to helping to increase the impact of supported projects, SIDN Fund also organises meetings for project representatives and facilitates a network for inter-project knowledge sharing and exchange. At the start of each funding round, the Fund holds a kick-off meeting. Two or three knowledge sessions are also arranged each year. In the Fund's first three years, there have been meetings on the following themes: Privacy & Privacy by Design, Positioning & Strategy, Education & Empowerment, High-impact Earning Models and the General Data Protection Regulation (GDPR). The meetings have forged ties between projects, thus improving their prospects of success. For example, project teams have collaborated on certain aspects and exchanged knowledge that was lacking within their individual organisations. Finally, the Fund and project representatives have been involved in third-party events, such as the ECP Annual Congress, Border Sessions, Mozfest, ThingsCon and SIDN Connect.
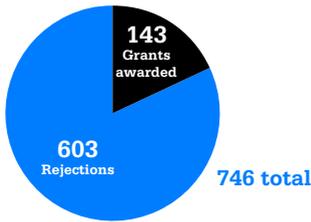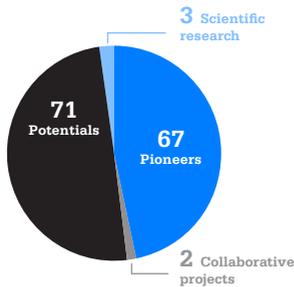
Facts & figures
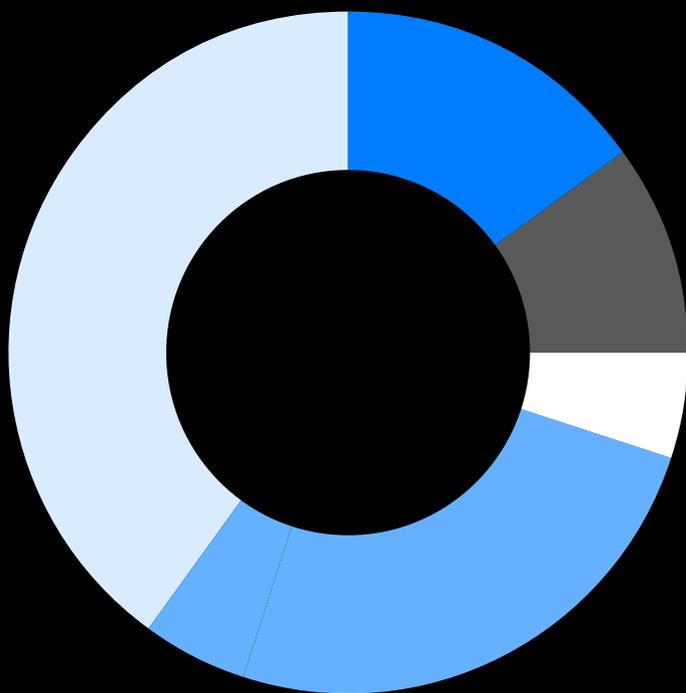
In the six funding rounds organised in the period 2015 to 2017, grants were awarded to a total of 143 projects.

The peak in awards came in 2017, when both calls were themed. The total value of grants awarded was €5,836,103. The average duration of a Pioneer Project was one year, while Potential Projects typically ran for two years.

143
Grants awarded

603
Rejections

746 total

APPLICATIONS 2015-17

6 OPEN CALLS

3 Scientific research

71
Potentials

67
Pioneers

2 Collaborative projects

GOALS

69
Tech for good

28
Empowerment of users

46
Stronger internet

13 Projects relevant to registrars and/or hosters

Pioneer Projects - bold and innovative ideas

€ 683.351

GRANT VALUE

65 total

29 concluded

8 developed into a Potential Project
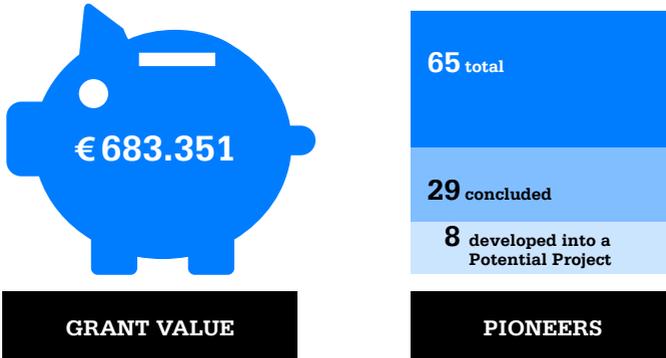
PIONEERS

Altogether, 322 Pioneer Project applications were received, of which sixty-five led to the award of a grant. In 2017, two Pioneer Plus Projects were also supported. The total value of Pioneer Project grants awarded was €683,351. Slightly fewer than half of the Pioneer Projects have now been concluded, of which eight have progressed to become Potential Projects.

Good progress is therefore being made with the aim of creating a nursery for idea development. Nevertheless, supporting projects of a somewhat experimental nature does involve an element of calculated risk. SIDN Fund does not expect all the projects to reach a successful conclusion or to yield products or concepts suitable for scaling up. A sizeable majority of completed Pioneer Projects have been judged unready to be taken to the next level. The step from Pioneer Project to a Potential Project application is often too great. At the end of 2017, the decision was therefore taken to introduce an intermediate category, the Pioneer-Plus Project. Such projects qualify for funding of up to €20,000 to facilitate the transition to Potential status.

Potential Projects – social potential and long-term impact

€ 4.370.152

GRANT VALUE

71 total

42 (nearly) completed
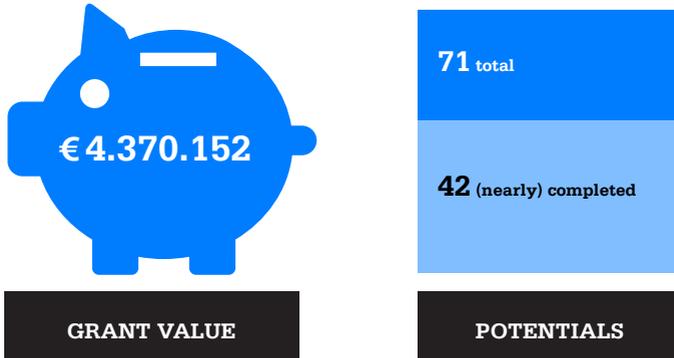
POTENTIALS

In the first three years, 414 Potential Project applications were received, of which 71 led to the award of a grant. The total value of Potential Project grants awarded was €4,370,152. Just over half of the projects have since been concluded or are nearing completion.

Of the projects completed to date, 80 per cent have yielded follow-on activities. Notably, the great majority (78 per cent) of project organisers are funding the follow-on activities themselves, and most (67 per cent) are in active discussions with potential new financiers. Indeed, 39 per cent have already found a new investor.

The Potential funding model often results in high-quality and innovative projects, most of which succeed in realising the intended deliverables. Nevertheless, the Fund believes that there is scope for improving progression and the development of sustainable growth models with long-term impact. Furthermore, project organisers report that in this early stage of development they require not only financial support, but also other forms of

assistance and guidance, such as coaching, advice and introductions to potentially useful partners and follow-up financiers.

Early-stage investment
The Fund's chosen strategy of focusing on early-stage investment has proved to be a success. Many project organisers report that they require considerable support during the start-up phase, particularly those whose priority is social impact and who therefore face challenges securing funding from commercial sources. For start-ups with an impact-first objective, the Fund's support affords them welcome shelter, in which they can develop new services, applications or a strong community, without the need to immediately secure income. Financial and networking support from SIDN Fund enables accelerated professionalisation and provides an opportunity to set growth in motion and build a valuable circle of contacts.

Results and impact – a small selection
A small selection of the results and impacts achieved by supported projects is presented on the following pages.
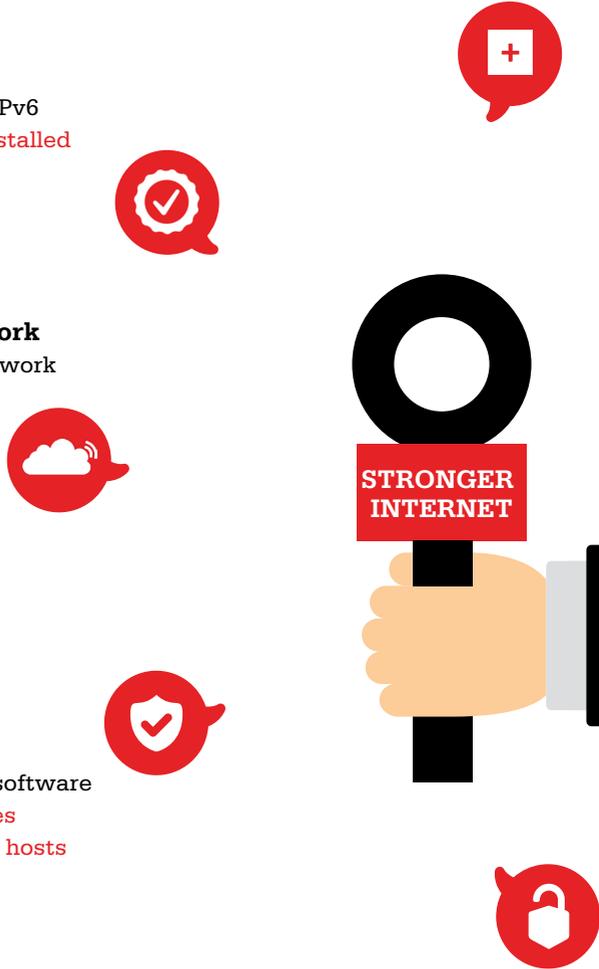
RESULTS & IMPACT

NetAidKit
open source portable router
1000 sold

DHCPKit
migration to IPv6
2750 times installed

The Things Network
open source IoT network
2500 gateways
35.000 members
500 communities
> 90 countries

STRONGER INTERNET

AbuseIO
open source abuse software
90% less abuse cases
85% less vulnerable hosts

Internet and Cyber Security Health Check
overview actual security vulnerabilities
16.000 vulnerabilities reported

The Creative Code
learning pathway creative coding
> 7000 students
> 1000 teachers
315.000 students MediaMasters

CodeUur/FutureNL
digital skills for all children
126.405 children followed a code class
14.600 Kidsweek Code magazines to
3000 schools
11.368 children world record coding
500 schools on expedition micro:bit

EMPOWER-
MENT

SkillsDojo
21st century skills for children
online missions > 3000 views

National Birthday Calender
big data awareness
theater performances > 500 visitors
lectures > 2100 bezoekers
online publications & media > 8.500.000 views

Blockchain for Food
transparent food chain with blockchain
reached thousands of consumers at the Parade Festival

Otly!
e-banking app for children
15.000 children connected

TECH FOR GOOD

Internet of Coins:
exchange platform for digital currency
crowdfunding raised 3 million dollars
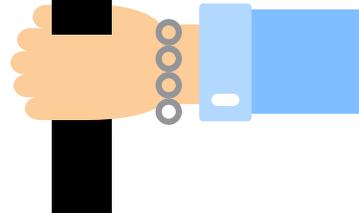
HackYourFuture
refugee code school
> 100 participants
35 students graduated
31 jobs/ internships

Media attention and awards

Supported projects have received considerable media attention and numerous awards in the first three years of SIDN Fund's existence. Projects such as WhiteSpots, Otly!, Code Hour, The Things Network, Internet Cyber & Security Health Check, Blockchain for Food, HackYourFuture, Smell of Data and The National Birthday Calendar have reached a lot of people, including large newspaper, radio and TV audiences. Many of the projects have attracted considerable nationwide and international interest. The Things Network is spreading all over the world, HackYourFuture is adding five new schools across Europe, Internet Cyber & Security Health Check has been covered by BBC News, and The National Birthday Calendar featured at the international media and tech festival SXSW, drawing considerable interest from other countries. By communicating with wide and international audiences, projects help to spread the Fund's message.

Another striking aspect of the forty-two projects that have concluded or are nearing completion is the large proportion (44 per cent) that have been nominated for prizes and awards or selected for accelerators/incubators. Over the three years, supported projects have garnered no fewer than twenty-five awards, including the Dutch Fintech Award 2017, ISOC Awards 2016 & 2017, the Soldaat van Oranje Prize 2017, the Stuiveling Open Data Award 2016 and the Comenius EduMedia Award 2016.

Public profile

SIDN Fund has developed into a professional organisation that fulfils a real need in relation to the early development, initial implementation and upscaling of good ideas.

AWARDS

25

prize-winning projects

2

thesis Awards

EXPOSURE

> 150

projects in the media

> 70

SIDN Fund in the media

KNOWLEDGE COMMUNITY

29
contributions to events by SIDN Fund and projects

5
Knowlegde sessions

6
Kick-off meetings

COMMUNICATION SIDN FUND

1786

220

88

1091
Subscribers Newsletter

26
Sent Newsletters

SIDN Fund has built up a strong and valuable network of sister organisations, partners and experts. It has also contributed to knowledge-sharing amongst projects and within the wider internet community. Since starting work, SIDN Fund has continuously raised its public profile with targeted and themed funding. That has yielded spin-off benefits in terms of recognition of the SIDN brand.

What has been achieved?

SIDN Fund is proud of what it has achieved in its first three years: numerous projects have delivered striking results that have not gone unnoticed in the wider community. By doing so, the supported projects have contributed substantially to the objectives of the Fund. Although their effect can sometimes be difficult to quantify, the Potential Projects in particular have delivered a tangible boost to the SIDN Fund's objectives.

In this section, the contributions made to each objective are set out. By way of illustration, the impact of several specimen projects is described. For a complete list of supported projects, visit *www.sidnfonds.nl/funded-projects.*

OBJECTIVE 1:

Making the internet stronger

SIDN Fund believes that a strong internet means an internet that is safe, open and freely accessible to all.

Projects supported by the Fund contribute to the realisation of a strong internet by delivering new technology and applications (secure and reliable infrastructure, software, hardware, applications and services) and by improving or reinforcing existing infrastructure, software, hardware, applications and services to make them secure and reliable.

Reaching a wider target group
Numerous high-quality, innovative projects that support this objective have been organised, particularly projects that have delivered relevant, new or improved open-source software and hardware. There is a clear need for support for such early-stage technology development. Because few other funding organisations have a similar focus, SIDN Fund is able to make a real difference in this field. In terms of impact on the Fund's mission (a strong internet for everyone), substantive outcomes have proved to require a longer time horizon than originally anticipated.

DDoS and Botnet Pattern Recognition

Research aimed at identifying patterns in DDoS attacks, with a view to making NaWas more effective.
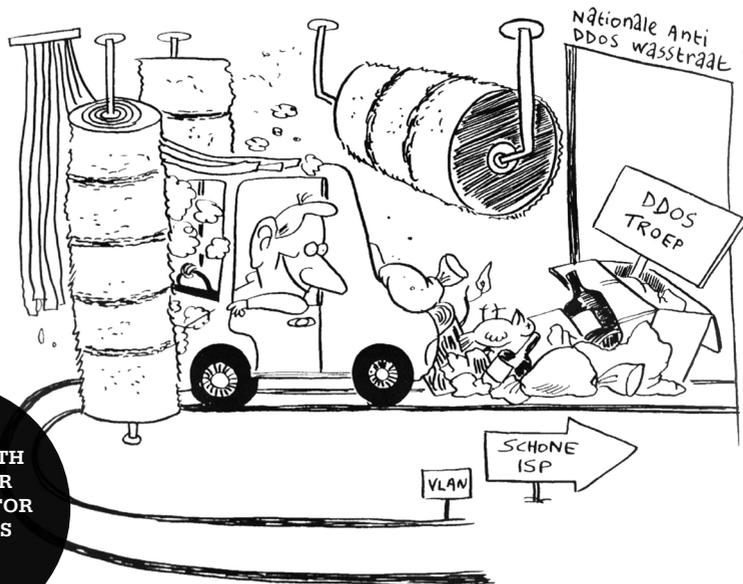
PROJECT WITH PARTICULAR RELEVANCE FOR REGISTRARS AND/OR HOSTERS

Problem

As well as inconveniencing individual internet users, DDoS attacks can be seriously harmful when vital infrastructure is targeted. Early detection and the diversion of traffic via an anti-DDoS server can prevent or mitigate the damage caused. The University of Twente has demonstrated that DDoS attacks can be reliably identified by analysing data traffic.

Solution

The Nationale anti-DDoS Wasstraat (National anti-DDoS Washer, or NaWas) protects small and medium-sized internet access providers against DDoS attacks. In this project, the NBIP Foundation built on the NaWas service by investigating possible patterns in DDoS attacks and correlations between attacks and traffic types. The aim was to improve identification of

attack structures and the botnets responsible for attacks, in order to make the NaWas more effective and thus enhance the security of the internet generally.

Early detection and the diversion of traffic via an anti-DDoS server can prevent or mitigate the damage caused.

Results and impact

The project has been successfully concluded. The project delivered an open-source pattern recognition tool that identifies and names attacks. Significant contributions were made to the science of pattern recognition, knowledge sharing and ultimately the reduction of attacks.

The standard was widely distributed and taken up by NBIP participants, the University of Twente, Radically Open Security and the Ministry of Economic Affairs. The project team worked with the University of Twente and Radically Open Security, whose Open Source Anti-DDoS Solution

Project (OSAS) was also supported by SIDN Fund. The OSAS prototype for measuring the network traffic associated with DDoS attacks was implemented within the project.

NBIP has since participated in a follow-up research project known as DDoSDB (Collecting, Transforming, Applying and Disseminating DDoS Attack Knowledge) and another project called Anti-DDoS for Dependent Networks. The latter project was a collaboration between NBIP and the Registrars' Association, aimed at enabling small hosting service providers without their own independent networks to protect themselves against DDoS attacks. Both follow-up projects received grants from SIDN Fund.

AbuseIO 6.0

Extending open-source software designed to tackle internet abuse.

Problem

Abuse of the internet, such as spamming, phishing and malware distribution, has increasing impact on society. An intelligent response to such activities has to be based on collaboration. AbuseIO is open-source software that enables hosting and access providers to quickly, easily and automatically detect, tackle and alert end users to abuses occurring in their networks.

Solution

In an industry-wide initiative by hosting service providers to extend the AbuseIO open-source software, version 6.0 of the package was developed. Featuring substantially increased functionality, AbuseIO 6.0 has secured a marked upturn in user numbers. The AbuseIO software enables errant and vulnerable internet hosters to be dealt with more quickly. They are identified by the service provider and

The AbuseIO software enables errant and vulnerable internet hosters to be dealt with more quickly.

appropriate control action is triggered. The AbuseIO process is fully automated. It therefore greatly relieves service providers' anti-abuse workload, so that abuse reports can be dealt with more quickly. Operators/end users are notified about host-related problems sooner and receive problem-resolution pointers.

PROJECT WITH PARTICULAR RELEVANCE FOR REGISTRARS AND/OR HOSTERS

Results and impact

Service providers report that the software enables them to act more quickly and to prevent and stop more abuse. Deployment of AbuseIO yields impressive results: up to 90 per cent fewer abuse cases and 85 per cent fewer vulnerable hosts in providers' networks. The system's users now include numerous big names from the Dutch registrar and hosting community, as well as firms based in other countries. The Lead Engineer on the AbuseIO team has been named Engineer of the Year by DHPA, an association of leading Dutch cloud service providers and suppliers.

SIDN Fund has since awarded a grant to a follow-up project: Process Automation for Internet Abuse Reporting Organisations. Such organisations include the Reporting Hotline for Internet Child Pornography. In the new project, the AbuseIO software is being modified to support swifter action in response to abuse reports.

Let's Connect!

Open-source VPN solution that enables secure use of public wi-fi networks

Let's Connect!

Problem

Open wi-fi connections available in hotels, restaurants, trains and other locations are often insecure. By using them, you risk picking up malware or having your communications intercepted by other users of the same network. A VPN (Virtual Private Network) is a good solution, but ISPs don't usually offer VPN services for cost reasons. What's more, many VPN products score badly where utility is concerned.

Solution

Let's Connect! is a completely open-source SURFnet product that complies with high security and encryption standards, and enables ISPs and hosting service providers to offer their customers secure connections at affordable prices. Let's Connect! is also an attractive option for organisations with numerous customers or personnel, e.g. schools and government agencies.

Results and impact

The server has been developed and apps are available for various platforms, with the iOS app expected at the end of 2018. SURF now offers Let's Connect! to the academic and research staff and students of educational institutes under the name eduVPN. The aim is to get eduVPN established as the VPN standard for the education sector. In collaboration with Géant, a project was started in 2018, which offers the prospect of an international breakthrough. The next step will be to make Let's Connect! available to internet access providers. XS4ALL is currently looking at the possibility of offering a service to its customers.

Let's Connect! is based on OpenVPN; consequently, the project has led to SURFnet being unexpectedly admitted to the OpenVPN core developers community, as the only provider of additional open-source tools and extensions to the OpenVPN code. At the start of 2018, Let's Connect! received ISOC's Innovation Award.

PROJECT WITH PARTICULAR RELEVANCE FOR REGISTRARS AND/OR HOSTERS

Open wi-fi connections available in hotels, restaurants, trains and other locations are often insecure. By using them, you risk picking up malware or having your communications intercepted by other users of the same network.

OBJECTIVE 2:

User empower-ment

SIDN Fund explicitly seeks to promote knowledge and skill levels amongst internet users.

So, for example, support is given to projects aimed at increasing awareness of how the internet works, and what the associated opportunities and risks are. The Fund also assists projects that raise skill levels, particularly in children, so that they can navigate the net freely and safely. Introducing school pupils to programming comes under that heading. Also relevant in that context are projects designed to enhance the information position of patients or citizens.

Clear impact

From the evaluation, it is apparent that the Fund has established a distinct position in this field. Numerous impressive projects have been enabled, and have gone on to achieve excellent results and, in many cases, clearly discernible impact. The projects aimed at boosting children's computational skills have been particularly effective in that regard. Such projects have seeded a spreading network of connections and generated significant interest in the theme within the education sector and amongst decision-makers and opinion-leaders. SIDN Fund has played an important role as instigator of the process. The project organised in collaboration with CodeUur/FutureNL with the aim of getting digital skills established on the school curriculum has also made a key contribution.

CodeUur / FutureNL

Digital skills on the school curriculum

COLLABORA-TIVE PROJECT

Problem

In our rapidly digitising society, it is increasingly important for children to possess digital skills and to understand how technology works. SIDN Fund is a founding partner in CodeUur/ FutureNL, a project closely aligned with the Fund's objectives. This project's ultimate aim is that all primary school pupils should acquire digital skills. To that end, its mission is to get digital literacy established on the school curriculum. The first collaborative project was launched in 2015, and the partnership was extended in 2017.

Solution

As many Dutch schoolchildren as possible are being introduced to programming, e.g. by electronically matching schools and volunteer guest teachers in order to increase the number

SIDN Fund is a founding partner in CodeUur (now the FutureNL Foundation), a project closely aligned with the Fund's objectives.

of 'Coding Hours' delivered, by developing teaching resources, by producing a special edition of *Kidsweek* devoted to programming and by organising a programming world record attempt.

Results and impact

More than 100,000 children have received programming lessons, three thousand schools received the coding edition of Kidsweek and 11,368 children took part in the programming world record bid. The Smart Life teaching pack received the European Comenius EduMedia Award 2016 for the most innovative educational resource. In 2017, a further five hundred schools took part in Expedition Micro:bit. Considerable media attention was generated and FutureNL featured several times on popular current

affairs programmes for adults and young people. FutureNL has also worked hard to get digital literacy established as a standard part of the school curriculum, e.g. by lobbying in the run-up to elections. The campaign appears to have succeeded, with the theme addressed in the latest government coalition agreement.

"The grant from SIDN Fund enabled the CodeUur Foundation to achieve a critical mass. The Fund supported us from the outset, giving us the opportunity to secure additional sponsors. Close collaboration has accelerated our work and led to considerable professionalisation of our activities and expansion of our network." Ronilla Snellen, FutureNL

With a view to maximising impact, SIDN Fund encourages collaboration with other relevant initiatives. So, for example, FutureNL's Project Leader has advised smaller SIDN Fund-supported initiatives and incorporated various of those initiatives' products into the learning pathway developed by FutureNL.

The National Birthday Calendar

Creation of a birthday calendar for the entire Dutch population in order to increase awareness of big data

SPAART BORDSPELLEN
28 JAAR
MAARTEN

HOUDT NIET VAN TAART
31 JAAR
ANNEMARIE

DOWNLOADT ANIME
30 JAAR
MARJOLEIN

Problem

Whether they realise it or not, everyone leaves personal data behind as they navigate the internet. And the implications of doing so are often impossible for the user to predict. The snippets of information left behind may seem trivial and harmless, but when pieced together using smart techniques they can be sufficient to build detailed personal profiles. Such big data is big business in the world of commerce, with many companies actively seeking to harvest and analyse user data.

Solution

By compiling a National Birthday Calendar, the SETUP media lab wanted to demonstrate that personal data makes human behaviour measurable and quantifiable, and thus 'algorithmable' and predictable. SETUP's idea was to show the public how powerful big data is by organising a light-hearted stunt. Using information available on line, they have created a database containing the names, addresses and birthdays of Dutch people, together with gift suggestions

generated using profiling algorithms.

Results and impact

During compilation of the National Birthday Calendar, data items relating to 7.8 million Dutch people were found. In 780,000 cases, the information unearthed was sufficient for the project team to generate personalised gift suggestions. The project proved to be very mediagenic and therefore secured a high profile for itself and, more importantly, for the underlying theme. A great deal of media exposure was received. Intriguingly titled DIY NSA, a presentation at SXSW (an international media and tech-festival) generated a lot of attention from outside the Netherlands as well. A total of about 8,500,000 readers were reached via the media and on-line publications. In addition, more than two thousand people visited the presentations and more than five hundred attended the associated theatre show. Another effect of the project was to alert various associations and organisations to the vulnerability of their databases, prompting them to make changes. For example, the organisation that represents the accountancy profession in the Netherlands stopped publishing members' names and addresses on its website. After two years, the project was formally wound up and the collected data erased. However, the initiative did not end there altogether. A card game – the National Birthday Calendar pocket edition – was developed for use in workshops in schools and libraries.

During compilation of the National Birthday Calendar, data items relating to 7.8 million Dutch people were found. In 780,000 cases, the information unearthed was sufficient for the project team to generate personalised gift suggestions.

HackYourFuture

Programming course for refugees

Problem

In the IT sector, there is a shortage of programmers. At the same time, people coming to the Netherlands with refugee status are in need of work.

Solution

HackYourFuture is a programming course for refugees with and without a background in the field. Students get six months' training, at the end of which they are qualified JavaScript programmers. Doing the course greatly improves their prospects on the labour market. At well as learning to program, students are introduced to Dutch working culture, teamworking and job application skills. HackYourFuture's central aim is to help as many students as possible to find work.

Results and impact

Over the project period, 104 students started the course. Of those, thirty-five successfully completed the course, and

thirty-one have since secured internships or full-time jobs. One of the students built a platform called amsterdamvoorziet.nl, which helps people living below the poverty line in Amsterdam to find the facilities they need. The platform is used by several thousand people a month. Another platform – Openembassy.nl – was developed in collaboration with the Institute for Public Values, again with support from SIDN Fund. The platform enables refugees to put practical questions about life in the Netherlands to volunteer respondents. HackYourFuture has won various awards, including the 2017 Soldier of Orange Prize. The project has been very prominent, featuring in newspapers such as NRC, FD and Vrij Nederland, as well as on-line publications and popular TV current affairs programme *NOS journaal*.

HackYourFuture has won various awards, including the 2017 Soldier of Orange Prize. The project has featured in newspapers such as NRC, FD and Vrij Nederland, and on popular TV current affairs programme NOS journaal.

OBJECTIVE 3:

Tech for good

The Tech for Good projects supported by the Fund seek to make intelligent use of the internet to deliver groundbreaking solutions to social problems.

They include projects in fields such as health care, sustainability and security.

Great diversity

Tech for Good is broadest of our three objectives, and that is reflected in the diversity of the numerous well-designed and valuable projects associated with it. Such diversity makes the comparison of project results and impacts quite challenging. It may therefore be appropriate to narrow the focus in the future. Indeed, given the clear demand for additional guidance and coaching in the transition from successful project to viable follow-up, bundling around specific themes may well be advantageous.

The Things Network

Open-source, decentral network for the Internet of Things and open alternative for home networks

Problem

The Internet of Things (IoT) has great potential value to society. However, it is important to consider how can we ensure that the IoT is accessible to everyone and remains decentralised, not controlled by a single authority. The Things Network is an open-source, decentral, crowd-sourced and free-to-use IoT network that enables everyone to access the Internet of Things.

Solution

As well as realising a network architecture, the Things Network (TTN) has built up support amongst users. Strategies such as encouraging the development of local communities ensure a sustainable development platform and decentralised ambassadorship.

Results and impact

Some 2,500 gateways to the software have been realised. TTN now has more than 35,000 IoT developer (i.e. member) accounts in ninety-plus different countries. Furthermore, five hundred local communities have been established around the world, thirty-six of them in the Netherlands. TTN also hosts a Peer2Peer forum, attracting thousands of visitors daily. There's a public wiki, GitHub repo and on-line documentation, including a YouTube channel with webinars available to the global community. An inaugural Things Conference in January 2018 was a great success.

even making a presentation to the ICANN board. TTN won the Internet Innovation Award in 2016. SIDN Fund has twice made follow-up grants to TTN.

The Things Network now has more than 35,000 IoT developer accounts in ninety-plus different countries. Furthermore, five hundred local communities have been established around the world.

The initiative has received considerable (inter)national media exposure and the founders have become regular speakers at conferences at home and abroad,

Patient Forum Miner

Using data mining techniques to extract valuable information from mutual support forums, for the benefit of cancer patients

Problem

On average, one in three Dutch people develops cancer. On internet platforms and patient forums such as kanker.nl, people affected by cancer support one another and share tips and experiences. The information posted is often valuable not only for patients, but also for doctors and researchers. The Patient Forum Miner was therefore set up to utilise the untapped potential of the forums.

Solution

Innovative tools and analysis techniques were developed for extracting and distilling data from forums. Using the open-source tooling, patient-generated information can be obtained from forums and used to improve the quality of life for other people affected by cancer.

Results and impact

The project delivered practical input to the Erasmus Medical Centre, which helped to shape the research agenda for GIST patients. Information was also obtained regarding the best way to take a particular cancer medication (i.e. with chocolate), thus enabling side-effects to be minimised.

Using the open-source tooling, patient-generated information can be obtained from forums and used to improve the quality of life for other people affected by cancer.

The software tools developed for the project have generated a great deal of positive feedback. They have already been implemented in various patient group discussion forums in the Netherlands and they are set to enter use elsewhere too.

The organisers have made presentations at various national and international gatherings, and various articles about the project have been published. What's more, the tooling is suitable for use in other forums and other domains, and therefore has great potential for the wider community. In that context, the validation of patient experiences mined from on-line communities is particularly important. Such validation is currently being undertaken as part of a project supported by SIDN Fund through its academic research grant initiative.

Otly

A secure financial ecosystem for children
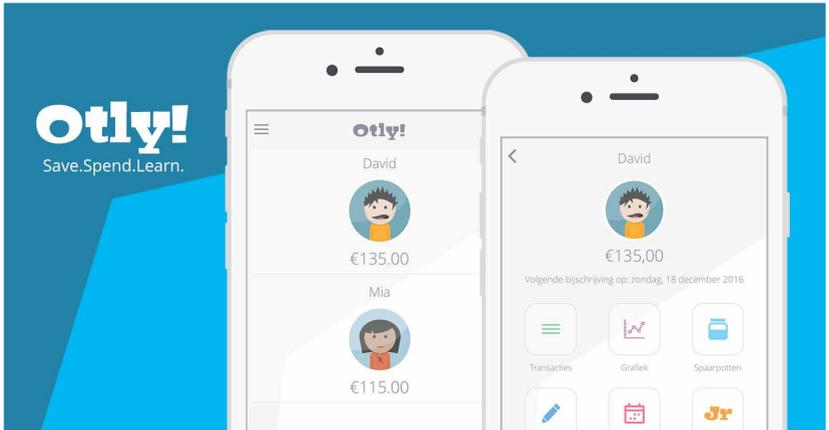
Problem

We live in an increasingly cashless society, and not many people carry much cash these days. As a result, giving children pocket money is not the straightforward thing that it used to be. What's more, children often want to spend their money on line. Against that background, how can we teach our children to manage money in the digital world?

Otly! is an e-banking app and platform for children aged seven to twelve. They can get their pocket money electronically, save up, and buy things on line.

Solution

Otly! is an e-banking app and platform for children aged seven to twelve. They can get their pocket money electronically, save up, and buy things on line in a secure environment with parental supervision. In its current form, the Otly! app works only with virtual money. A conventional bank account is linked to the app, enabling interaction with mainstream banking systems. The app is also designed to educate young users about things such as security, passwords and the risks that come with on-line payments.

Results and impact

More than fifteen thousand children in ten thousand households now have Otly! accounts. The project has attracted a lot of attention from the media, has featured at various shows, and has received a number of accolades, including the World Summit Award 2017 and Dutch Fintech Award 2017. Otly! was also shortlisted as one of the enterprises of 'proven significance' that have had the most positive impact on the world of finance. To complement Otly!Pay, Otly!Give was launched

at the end of 2017 with Serious Request as the main beneficiary. Integration with Bunq Bank already enables real-world payments to be made, and when the PSD2 legislation comes into effect in 2018, Otly! will be able to interact with all banks in Europe. To facilitate the project's next phase – the realisation of links with other banks and the onboarding of new investors – SIDN Fund has given Otly! a loan through its pilot lending scheme.

What do stakeholders think of the Fund?

For the purpose of the evaluation, a meeting of SIDN Fund's stakeholders was arranged to obtain feedback and input. Invited stakeholders included registrars and other internet companies, community organisations, knowledge centres, the government and other foundations.

Amongst the topics covered were innovation, the strength of the Fund's network and the scope for closer collaboration in the future.

Open and broad outlook

Stakeholders were very positive about the Fund's support of experimentation and innovation (for which there is a real need), and about the Fund's open and broad outlook on such activities. Over the last three years, the approach has yielded a portfolio of innovative and worthwhile projects. The subsequent progression of supported projects remains an issue, however. Project organisers have particular difficulty bridging the gap between the Fund's start-up support and the follow-on finance needed to achieve long-term impact.

In addition to the Fund's financial support, project organisers clearly need guidance and coaching. Looking ahead, that situation may represent a key opportunity for the Fund to play a distinct and influential role, facilitating the further development and long-term impact of supported projects. However, the stakeholders also highlighted the additional pressure that such a role would place on a small organisation and indicated that they were willing to play a part in assisting projects.

The Fund has built a strong network and is clearly focused on collaboration. Stakeholders are very positive about the Fund's approach to networking. Opportunities for enhancing network utilisation are plentiful.

Strong network

The Fund has built a strong network and is clearly focused on collaboration. Stakeholders are very positive about the Fund's approach to networking. Opportunities for enhancing network utilisation are plentiful. Internet enterprises, the government and other foundations all expressed a willingness to be more actively involved with the Fund and thus to further strengthen the Fund's network and the impact of the supported projects.

Impact

The stakeholders also indicated that the impact of the Fund's work was not easy to determine. The results and outcomes of the various projects cannot simply be tallied up; they are far too diverse. It is also too early to make any definitive assessment of the Fund's impact. To a large extent, that impact is likely to become apparent only after a significant period, when the projects have long since emerged from beneath the Fund's wing.

Conclusion
& outlook
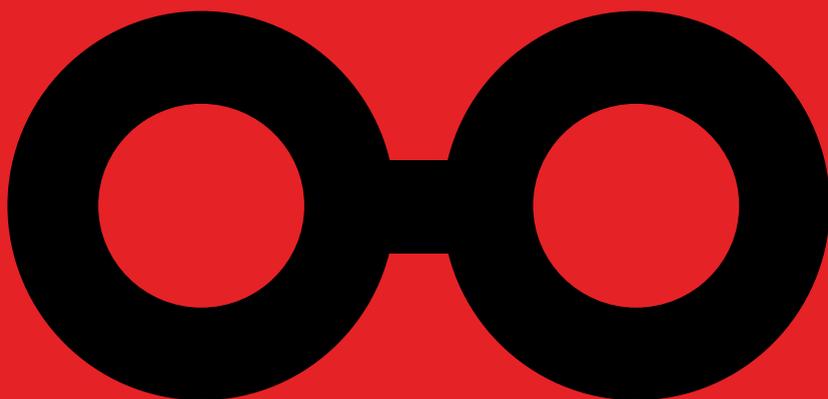
We may conclude that SIDN Fund meets a real need, has quickly developed into a professional organisation and prominent player, and has good reason to be proud of the projects it has supported.

The self-evaluation and the stakeholder meeting yielded some valuable insights, which will influence SIDN Fund's forward planning. After all, nurture is just as important as seeding.

Development of projects into impactful initiatives
It is particularly important to work on the development of supported projects into sustainable, impactful initiatives. In the years ahead, additional attention will therefore be given to project progression. The Fund believes that intensified collaboration with the internet sector, other financiers/foundations, experts, incubators and accelerators can be advantageous in that regard, and intends to pursue those ideas as follows:

- The Fund is looking at the possibility of focusing its funding rounds more sharply. A first step in that direction was taken in 2017, when theming was introduced. In relation to the Tech for Good objective, a narrower focus will reduce project diversity; at the same time, association with particular themes (or particular domains, such as health care) will make it easier to effectively and efficiently provide for the additional support that projects require.
- In view of the clear demand for additional guidance and coaching in the transition from successful project to viable

follow-up, SIDN Fund has started a pilot, which is intended to give project organisers access to a network of mentors, coaches, alumni, consultants and others. Organisers receive vouchers, which they can use to buy in knowledge and expertise.

• SIDN Fund also intends to investigate whether more prolonged and closer relationships with supported projects can facilitate the development of a sustainable growth model. In 2018, as well as piloting the provision of support vouchers, the Fund will experiment with the extension of loans to initiatives that have previously been supported as Potential Projects. The Fund sees lending as a promising route to impact maximisation.

• Wherever possible, SIDN Fund will also put project organisers in touch with people and organisations who can assist with further development.

Another prominent item on the Fund's agenda is the involvement of registrars. Steps to increase registrar engagement have already started, in close cooperation with SIDN. Finally, the Fund intends to intensify its strategic communication work: a lot can be gained by communicating effectively about what the Fund has achieved through its project support, and about what the Fund stands for in relation to certain themes.

SIDN Fund is very pleased that SIDN – having considered the evaluation of the Fund's first three years – has decided to maintain its financial support for the period ahead. The decision means that the Fund can maintain its development and continue supporting new projects that contribute to a strong, open and free internet for everyone.

According to SIDN, the evaluation shows that the Fund is making a good job of fulfilling its mission and realising its objectives. By doing so, the Fund is contributing to SIDN's aim of delivering added value for the internet community and thus the general good.

"After all, a strong internet sector is the basis for innovation in the Netherlands and for increasing the prosperity and welfare of the nation." Roelof Meijer, CEO, SIDN.

SIDNfonds