Twelve Dot www.twelvedot.com

Company:
TwelveDot is a boutique technology and security consulting practice with decades of experience advising, managing, designing, and developing solutions for clients from a wide-range of sectors. Clients include equipment manufacturers, software development companies, cloud solution providers, government departments, crown corporations, and private sector businesses.

Our services include: security and application engineering, corporate security policies, international
standards, network and application assessments and design architecture. Innovative and results driven, TwelveDot combines business acumen with creativity and technology to deliver effective and
measurable technology solutions.

We have developed a platform for security audit and assessment that is currently be used for assessing the cyber risks of companies and products globally. This platform allows us to assess technologies and companies quickly and cost-effectively for potential cyber risks.

Main business areas:
a. Performing threat and risk assessment (TRAs) on both products and organizations;
b. Security design services for new application, services, and devices;
c. Formal security testing and evaluation (penetration testing) of applications, services, and devices;
d. Development of frameworks and risk management programs specific to an organization;
e. Security auditing of technology deployments;
f. Virtual Chief Security Officer support.

Tech areas for collaboration with Korean companies:
We are hoping to build an assessment framework for Smart Cities that we can use when performing risk assessments against any city, town, or municipality. Once developed, we will integrate into our
assessment platform to be able to quickly and cost-effectively assess cyber risks for smart city clients
globally. The platform for assessment is currently deployed and has been configured with several of
standards and assessment methodologies we have developed over the years.

The focus will be to determine the specific attributes that have to be risk assessed for the deployment of technologies in a smart city context. We will build on our current expertise in developing IEC standards in this area to reduce our time and effort. We have team members who have worked on developing both ISO and IEC frameworks for technology and security. This includes working with clients and universities to validate and implement these approaches to secure their businesses.

We would hopefully be able to foster a partner relationship(s) with vendors, municipalities, or universities in South Korea to develop these approaches for a shared benefit.

Competitive advantages:
Over the past 11 years we have grown the depth our team and partners globally to aid in larger projects. This has helped us to provide a level of service for cyber security expertise that many companies cannot offer due to lack of experience and having a global purview of projects and technologies.

With the help of partners and joint research projects, we have developed a platform for assessment. This is currently being used to evaluate many companies in many sectors including IoT, healthcare, and engineering services. As new technologies and subsequent risks are identified our platform is expanding to looking at many use cases such as smart cities.

Our technology will quickly aid any organization or municipality to determine their overall cyber risks for any given smart city project. Once completed, the cost and effort will be affordable by even the smallest of municipalities.

Major clients/partners:
- Canadian Internet Registry Authority (CIRA)
- Canadian Standards Association (CSA) Group - Global
- Novartis - Switzerland
- Internet Society - Canada Chapter
- Public Safety Canada

Technology development and international partnerships:
a. We were hired to develop and deploy DNSSEC for .ca in Canada. We worked with our client CIRA to develop their policy, validate, and test the technology, and deploy in their data centers across Canada. As a result of this technology implementation; it has been replicated by many other ccTLDs across the globe. This includes being one of the few countries to deploy DNSSEC without experiencing a countrywide DNS outage.
b. As consultants, we provided ongoing services to the Mobile Technology Group for Novartis Switzerland. We developed the tools and techniques to evaluate each new iOS revision to determine whether any cyber risks that might be present for the current technology deployment and mitigating actions. This includes on-going support to identify risks around applications being used on the mobile device by staff.
c. Working with several Canadian universities, we have developed a security and privacy frameworks for healthcare IoT.
d. We have worked with several Government of Canada departments to develop strategy documents related to both Smart Grid and Cloud Computing over 9 years ago.
e. We have been awarded contracts by Public Safety Canada on research and development projects related to IoT and assessment frameworks. This has resulted in the development of the General Code Assessment Methodology (GCAM) that is copywritten and used for all formal assessments undertaken by TwelveDot.

Meeting objectives:
Our goal is to work with a university, research center, or product company in South Korea to develop an evaluation methodology for formally evaluating security and privacy risks for smart city projects. We want to partner to perform the research and development on algorithms necessary to evaluate a smart city implementation that can be integrated into our platform.