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# i3PT

Ireland, [www.i3pt.ie](http://www.i3pt.ie)

A certification company in the construction industry involved all the players in their value chain in the co-creation of software which has given them a strong USP and the opportunity to charge higher prices for their service

## Executive Summary

The company i3PT (in-depth 3rd Party Testing) focuses primarily on giving certification to construction projects, which is consistent with the Irish Building Regulations. Their process is impartial and focused on all the practices that form part of the building process. In order to deliver the certification, they have developed a multidisciplinary approach and a software platform (CertCentral) that will allow them to provide a better service to their clients and their stakeholders.

i3PT has used open innovation primarily by engaging with lead customers and users and adopting their feedback into the design, implementation, and maintenance of their software system. In addition, this has led to various forms of innovation that include organizational (to be able to incorporate user feedback) and service-based. The SME has also worked with Enterprise Ireland which has helped them develop and market their services.

**CASE N°: UKI49**

**SECTOR: CONSTRUCTION**

**TECH INTENSITY: LOW-MEDIUM TECH**

**LIFE CYCLE STAGE: ESTABLISHED**

**INNOVATION VECTORS: PRODUCT, PROCESS, SERVICE, ORGANISATIONAL**

**OI PARTNERS: PSR, INDIVIDUAL EXPERTS, LEAD USERS/ CUSTOMERS, GOVERNMENT AGENCY**

**KEYWORDS: Software, service innovation, value chain, users, construction, certification**

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## BACKGROUND

The founder established the company in 2010 and focused on auditing and certifying buildings for quality and compliance standards in the construction industry. The company was set up to improve standards and set up a certification body; other large companies exist to do this job, but there are not many SMEs in this business, particularly in the construction and engineering industry.

In order to provide the service, the firm realized that they needed to engage with all the users in the certification process, particularly the architects and engineers and sub-contractors. In order to improve better building standards, they acknowledged that they had to make all the different trades work together and communicate with each other. Therefore, as a second and significant step, they developed the software (CertCentral) and a sophisticated ISO process.

The company is looking at a number of options, such as making information more useful in the long-term to make sure that it is able to support all stages of the building's life cycle. They are also becoming involved in the design and development stage of the process rather than just auditing and certification. On balance, they are most likely to move in future to auditing and certification in another industry, most probably the food industry.

## INNOVATION CHALLENGE & MARKET OPPORTUNITIES

CertCentral is not the actual product that is being sold. The main part of the business is the certification process that the company delivers to its clients. The CertCentral software is a tool that facilitates the certification and quality auditing process. In Ireland, in order to be able to certify others with respect to building regulations, you only need to be registered as a chartered engineer or a registered architect/surveyor. i3PT's innovation was not essential for the main service being delivered as all other firms just hire good engineers and can possibly create spreadsheets that may be enough to manage the certification.

The main reason for developing CertCentral was the recognition that it could become an important tool for coordinating the different activities of all

the trades involved in the construction of a building and letting all the parties communicate with each other. The CertCentral tool is capable of coordinating the 500+ people taking part in construction projects. The main view was that individuals working on the project may not have the incentive or may not be willing to provide accurate information regarding safety and other issues that are important for the certification. The software therefore made it easier for people to be able to report their activities in a much more accurate way.

These challenges were mainly identified by the founder, who had previous experience in the building industry and understood the importance of the social dimension of reporting.

There was no clear market opportunity, as the software itself represents more of a process innovation rather than a product that can be marketed directly to the client. The software is important only in that it helps gather the data for the accreditation process, and therefore becomes an integral part of the service being provided. Ultimately, it is the service itself that is being marketed rather than CertCentral.

## OPEN INNOVATION TRAJECTORY

### Concept development

The firm brought in the services of Frank Judge who used to be part of Bord Bia (Irish Food Board which operates quality assurance schemes in the food industry) and therefore had experience in developing and running assurance schemes. They also engaged with Enterprise Ireland which provided funding for their research and some private investors. Most of the innovation around the software and the processes took place in-house, but the SME also engaged with its key stakeholders.

### The development process, IPR and competition strategy

When it came to the actual development of the software, i3PT engaged with a number of professional bodies and government agencies in order to design and deliver a system that would work. They worked with Engineers Ireland, where they had access to experts that would give them feedback, the Royal Institute of Architects and members of the construction industry federation.

This was part of their original research in order to understand better the needs and how these could be addressed by the software. This was done through focus groups with the professional bodies. In addition, government agencies were contacted, particularly the Department of Environment. The information that they provided may not have been crucial for the development of the software, but the company referred to as many stakeholders as possible to make sure that the software was fit for purpose.

In terms of other firms, they worked with law firms in order to clarify and understand what they needed to do in terms of the accreditation and how to mitigate risk. This would then lead them to work also with insurers in order to better understand what the general risks were in construction and where defaults may emerge.

Last but not least, i3PT worked with Cork Institute of Technology which helped them develop a prototype of the software and the concepts behind it. The software is proprietary, but the company does not commercialize it directly either through sales or licensing. They were given some advice from the start about the difficulty of both implementing and enforcing IPR, and therefore have decided to keep it in-house. Instead, the main benefit from the software is in terms of the overall experience and service that it allows the company to provide to their clients.

The company's competition strategy can be divided into 4 main points:

- 1. Independent 3rd Party Auditing:** This means that they are not affiliated with any other organization and can therefore provide impartial advice and a neutral service. They have third party audits every year to ensure that their work is carried out according to the rules and that they remain impartial in their decisions.
- 2. Multi-disciplinary service:** The main focus of the company is to provide a service that comprises the various aspects and complexities involved in construction projects, and how these can go on to affect the auditing process. As a result, they have a multi-disciplinary team that is composed of experts and people who cover all the specialist fields in a construction project. They employ not only highly skilled people like engineers, but also tradesmen such as plumbers and electricians.
- 3. CertCentral:** The software gives them a competitive advantage over other certifying bodies, as it represents a key tool in coordinating and facilitating the auditing and certification process. The software

creates an eco-system which is made available free-of-charge without having to license or charge extra for it.

- 4. Risk focused:** The company's view of risk makes sure that they focus on making people work smarter and concentrate on the areas that have a higher propensity to risk. This means that they can put their resources in the areas where they are more required and, as a result, they are able to work smarter rather than harder.

They do not focus on what their competitors are doing, and this has led them to be sometimes the more expensive option compared with other accreditation companies. They can find themselves in a position where they are charging their clients almost three times more than their competitors. The reason why they are able to do this is because they offer a completely different level of service. By not paying attention to their competitors the SME is able to set the standard rather than conforming to it.

## Commercialization and follow-up

One of the key problems when rolling out was the fact that, after the prototype was completed, they still had to be able to implement the software with all the users. Quickly they realized that this would be difficult because of the different language that the users employed. The first challenge was therefore to be able to develop a common design language that was able to cater to each of these groups.

In order to do this, they worked with the National Building Specification (NBS) in the UK where they learned about "Uniclass", which is a unified classification system for the construction industry. But the Uniclass system used different words to describe objects that others may not understand. For example, most construction workers refer to fire protection doors as "fire doors", but Uniclass called them "door sets". So when people were searching for "fire doors" they would not be able to find them. This led to the development of a "smart alias" where a "door set" could also be searched under other terms such as "fire doors". This list of aliases was created with the help of different working groups in order to understand how they described things.

i3PT has had to introduce more mid-office roles. The experts who were hired by the SME were not able realistically to deal with all the people they had to work with, including all the trades bodies and all the stakeholders and sub-contractors. They therefore had to develop the role of external operations manager. As a result, they introduced a

chief culture officer in the firm, who was in charge of setting guidance notes on how to extend the culture, managing lessons learnt, technical bulletins and guidance notes for staff on the things that were being learnt and how to improve. The external operations manager was also responsible for assessing how effective their community outreach was. He works together with all the subcontractors and the certifiers in order to track performance and makes sure that relevant information and knowledge are being shared and fully understood.

The company does not deploy any real marketing strategy for the service they provide as most of their work comes from word-of-mouth and from their portfolio. This means that, instead of having a very specific marketing strategy, they rely on the quality of their work and their previous projects in order to win more assignments. At the same time, they do not sell the software or provide any form of licensing deal, as it is all part of the general service they provide. They consider the software to be a digital manifestation of their service and that the software in isolation offers less value than the entire system and processes which they have implemented.

The software project has led to the development of apps that are being used by sub-contractors to improve quality. i3PT has developed apps that will allow the construction community to photograph the work that they do. This came as a result of the recognition that sub-contractors earn less than other highly skilled professions. At the same time, however, the sub-contractors are also responsible for delivering most of the outcomes of the project. Those on higher earnings are able to use more sophisticated inspection tools that allow them to measure quality and productivity. As plumbers and builders did not have access to these tools, i3PT developed an iOS app for the contracting teams which allows them to build their inspection reports. This was done in conjunction with the stakeholders, with focus groups providing ideas as to how the app and the system should work.

## BUSINESS IMPACT

The company was able to develop a prototype that has led to a tool that helped deliver their service and has given them a competitive advantage over others in the industry. It has helped them to gain marketing and reputational value in the industry, where they are known for the service they provide which is supported by the CertCentral software. In addition, this has allowed

i3pt to compete on quality of service rather than price, meaning that they have been able to charge their clients around three times more than their competitors, simply because they can provide a much higher level of service. The process of developing the innovation and engaging with trade associations has allowed i3PT to sell their services directly to clients on the strength of their increased reputation within the industry.

The company has learnt to take ideas from all its stakeholders and to incorporate them into the process. The focus is not just on product innovation, but it also extends to social innovation, in that it reflects how different groups within a project employ different practices and do not always share the same understanding of issues.

The bottom line impact on the company's business goes beyond the software and the process behind it and affects their whole innovation ecosystem.

## LESSONS LEARNED

The interest of this case lies in the company's use of knowledge and information from their stakeholders and users. The company also has a very good understanding of the importance of incorporating specialist information throughout the development process, helping them to understand and develop their innovation in a much smarter way. The impact of external sources of knowledge is not just reflected in their product innovation, but also affected their process and service innovation.

i3PT's innovation takes the form of a tool that has helped them to improve their main service. This has implications in terms of how they view IP and its protection, in that they consider the software as the embodiment of their service and as such cannot be used in isolation.

### Main lessons learned:

1. There is a need to "fail early" so that you can engage with the stakeholders and redesign the process much faster. There is no point in developing something and trying to get it right the first time. This is most relevant in cases where a large number of groups are going to be involved. It is therefore important for the prototype to be developed quickly, and then to move on to refine and improve the initial design. Don't say "we're not ready",

2. Do not be too protective about your ideas. Many SMEs believe that other companies may steal their ideas, but the truth is that other companies may be too busy to develop something else or to work on it. Be willing to discuss the ideas specifically rather than just marketing or selling the product; talk about the reasons why you do things rather than the business. If you give the impression of being interesting, people will want to know more about your business.
3. Agility and flexibility are a good thing, and it is also fairly easy to have such attributes when you are an SME. But you also have to be consistent, otherwise you may get a bad reputation and others may not want to work with you in the future.