

BI INTERNATIONAL CASE COMPETITION 2023

The second case delivered by:



International
Case Competition



LEVERAGE YOUR DATA

Project Phoenix



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inspired and helped by Bjørnar Torsnes and his team at
CodeIT for the BI International Case Competition
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Project Phoenix

The Project Phoenix case aims to identify and address external and internal threats when changing the fundamental business model on which a company and its culture are based. The results will be of interest to a great many SME companies worldwide.

Introduction

CodeIT was founded in 2011 by Bjørnar Torsnes. It started as a company supplying solutions for labelling products, printing barcodes, “best before,” etc., on finished products on a production line. In the past 12 years, CodeIT has grown into a very successful company, with about 50 employees in Norway (20), Vietnam (17), and Sweden (13).

CodeIT is a successful SMB and industrial software development company with offices in Norway, Sweden, and Vietnam. They are always looking for new ways to do things better. CodeIT’s turnover in 2022 was approximately USD 9.5 million. They deliver complete tailor-made solutions. Until 2022 our Key Account Managers acted as both Sales and Project Managers. In 2022 some re-organization took place, and CodeIT now has two dedicated Project Managers. No middlemen or distributors are involved. All sales and support are direct.

CodeIT has started a new secondary line of business called CodeIT eDoc™. It is a PaaS for project and manufacturing documentation management, used primarily by the Oil and Gas industry. CodeIT eDoc™ is not part of Project Phoenix.

Project Phoenix is focused on CodeIT’s main line of business. Since their start-up in 2011, their main line of business has been a database-driven production traceability platform called CodeIT Enterprise™. With CodeIT Enterprise™, they help manufacturers worldwide leverage their data to solve traceability, streamline production, generate value, and drive growth.

In 2015, CodeIT received a Gazelle award as one of Norway’s fastest growing and most successful companies, and in 2017, CodeIT was awarded EU Horizon 2020 research funding.

The CEO and founder of CodeIT, Bjørnar Torsnes, feels now that the company is at a crucial point in its development. He has acknowledged the need for a revision of their business model. They need to create more revenue from their customers. CodeIT is a company run by engineers. They have an impressive list of satisfied customers. The solutions are tailor-made, based on their product CodeIT Enterprise¹ and CodeIT eDoc², creating great value for their customers. CodeIT is a software company. Approved partners supply the hardware required for their solutions. CodeIT’s solutions are flexible, requiring a lot of tailoring and support, the cost of which is difficult to cover. A dream would be an off-the-shelf solution developed by CodeIT, but this seems impossible due to the nature and complexity of the solutions they provide.

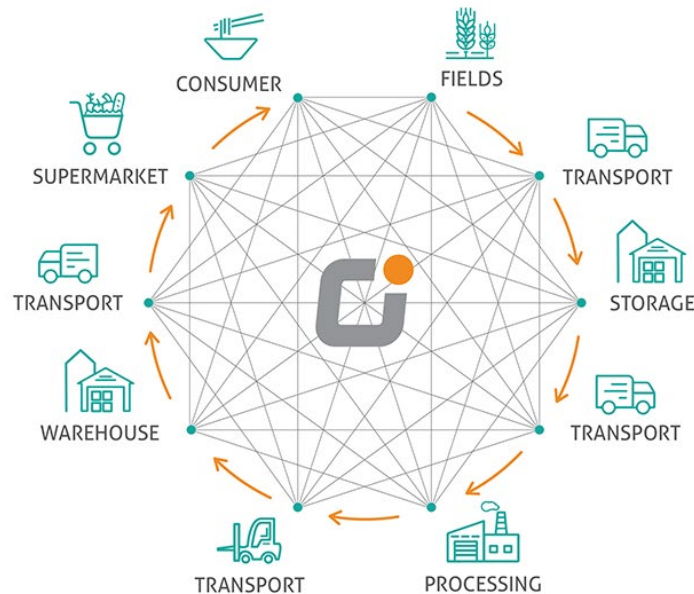
Bjørnar would like to see a business model that shows an annual recurring revenue (ARR) from CodeIT’s customers. This will secure a predictable revenue stream for the company.

¹ <https://codeitworldwide.com/codeit-enterprise/>

² <https://codeitworldwide.com/codeit-edoc/>

CodeIT

CodeIT is a software development company specialising in labelling, marking, and traceability. One of CodeIT's customers is Cermaq³, a leading global salmon producer. When they built their new production plant in Steigen, Norway they chose CodeIT as a partner. To get an idea of the type of solutions, CodeIT offers, please view the video “*Why Cermaq chose CodeIT*” (<https://codeitworldwide.com/fish/>). It illustrates the complexity and flexibility of CodeIT Enterprise (CodeIT's main service).



CodeIT headquarters are in Oslo, Norway. 20 people are employed in Oslo. Together with the branch office in Sweden, with 10 to 12 employees, they provide the project and support teams for their customers. Research and development are done in the Vietnam plant (with 17 employees), where the software solutions are developed.

CodeIT is a typical SBE (Small Business Enterprise) with all the benefits and challenges that entails. Whilst still a young company, although not a start-up anymore, they have the advantage of being agile and flexible. An advantage that attracts and is appreciated by the customers. The challenge is that, with this agility, flexibility, and focus on providing great solutions for their customers, work on creating a stable and reliable cash flow has not had the necessary focus. This may be a result of the company being engineer run.

“We chose CodeIT because they showed a great capacity for finding innovative solutions, which will provide us with a competitive advantage, and they were also the best offer in terms of flexibility, user-friendliness, and consistent use of open standards in all critical areas such as automation, tracking, and systems integration.”

Arnt Mjøen, IT Manager, MOWI ASA, Norway.

³ <https://www.cermaq.com/your-salmon-supplier/norwegian-salmon>

CodeIT's Products

CodeIT has two products: *CodeIT Enterprise* and *CodeIT eDoc*⁴

CodeIT Enterprise™ is targeted at four verticals: Food, Fish, Wood, and Industry.

CodeIT Enterprise™ is a success because it is hardware brand independent. It is a generic, highly configurable, scalable platform we can tailor to any manufacturing environment. Furthermore, with it CodeIT can integrate with virtually any business service the client may have (ERP, MES, SCADA, WMS, etc.). The CodeIT Enterprise™ production traceability platform is offered as an on-premises solution due to real-time communication requirements with production processes and equipment.

The CodeIT Enterprise™ focus has been on supply chain product traceability and production automation, mainly in connection with pallets and distribution boxes. CodeIT are always looking for new ways to help clients do things better, but sometimes things get taken for granted, and the value of the services is not fully appreciated. Recently CodeIT has started to embrace an increasingly strong demand for more precise traceability and documentation on consumer products. Suppliers with full traceability, documentation, a strong brand, credibility, etc., are paid significantly more for their products and surrounding services.



CodeIT eDoc is a versatile, industrial software solution for digital document management designed to enable superior, fast, and cost-effective documentation traceability. It is an innovative, highly flexible, fully scalable, cloud-based solution that automatically validates and digitally links all project, fabrication, and production documentation.

As a spin-off, CodeIT also provides business consultancy, assisting companies looking for solutions.

*“We have extensive experience with digitalization and critical business applications in many different industries. We know how vital ongoing consultation, analysis, and support are to our clients. We understand the importance of scalability, flexibility, and complete control. Regardless of the size of your business, our highly qualified team has the expertise to help lift your operations to the next level.”*⁵

Hallgeir Hansen, Service Engineer.

⁴ <https://codeitworldwide.com/>

⁵ <https://codeitworldwide.com/support/>

CodeIT's Customers

CodeIT has many customers in different sectors. The largest number of customers are in the food industry, both production and retailing. Customers such as Ceramaq, Orkla, and TINE to list a few of the Norwegian customers. They also have customers in other sectors – Forestia, Moelven, and Södra in the building materials sector and NorSun, a Norwegian solar energy company that manufactures and markets high-performance mono-crystalline silicon ingots and wafers for the global solar energy industry. And the list goes on. A comprehensive list can be found on CodeIT's homepage.⁶

Key clients are all located in and served by our sales offices in Norway, Sweden, and Vietnam. CodeIT Enterprise™ clients are leading manufacturers and brand names. Clients have CodeIT Enterprise™ installed in over 2,000 production lines in 18 countries and at sea. These are all supported remotely by the CodeIT Support Center (CSC) in Scandinavia.

Decision makers are owners, IT managers, Factory Managers, and Production Managers. The decision-making process at clients has shifted from Production Management to include IOT as digitalization and Industry 4.0 and 5.0 make deeper and deeper inroads into forward-looking manufacturing operations.

CodeIT Enterprise™ clients are very loyal. They stay with CodeIT year after year, and they grow together in symbiosis. The relationship is often so close that CodeIT is virtually an integral part of client's IT and Production Management Teams.



⁶ <https://codeitworldwide.com/clients/>

Sustainability

CodeIT is committed to developing solutions that are sustainable and built up under the UN Sustainability Development Goals. They see their role as primarily supporting goals #9 and #12.



#9. Innovation and technological progress are vital to finding lasting solutions to economic and environmental challenges, such as increased resource and energy efficiency.

CodeIT Enterprise™ can help provide a digital footprint for raw materials, produced goods, packaging, and load carriers to enable affordable transparency. Transparency is a core value for sustainable handling and recycling.



#12. There needs to be a significant focus on operating the supply chain, involving everyone from the producer to the final consumer. This includes educating consumers on sustainable consumption and lifestyles, providing adequate information through standards and labels, and engaging in sustainable public procurement.

Traceability is a core functionality in CodeIT Enterprise™. It helps enable an optimized flow of materials and services. Automatic identification ensures safety and measures waste at an early stage. Innovative use of this data and continuous monitoring are critical to sustainable production and reliable information for all stakeholders.

Carbon Balanced Labels.



**WORLD
LAND
TRUST™**

www.carbonbalancedpaper.com
CBPNORD00101

In cooperation with the World Land Trust's Carbon Balanced Paper compensation scheme, CodeIT is the first company in the Nordics to offer Carbon Balanced Labels.

Contributions to the Carbon Balanced program protect against deforestation and degradation, preventing the release of CO₂ into the atmosphere while preserving invaluable ecosystems.

"People at CodeIT love to engage and participate. Just as much as this is a key to our success, it is also the basis for our engagement as a team when it comes to realizing the values and initiatives defined in the United Nation's Sustainable Development Goals to achieve a better and more sustainable future for all."

Tommy Eriksen, Technical Manager, Norway.

Trends in labelling and traceability

Traditional barcodes are one-dimensional. They encode information in one direction. This limits the storage capacity to 20 alphanumeric characters. This limitation was improved by the invention of 2D (two-dimensional) barcodes. In 1987 David Allias created the first two-dimensional barcode. The QR (Quick Response) codes were developed in Japan in 1994. The QR code is a two-dimensional barcode that can store much more information than the traditional one-dimension barcode. Today a QR code can encode thousands of characters.

Benefits of 2D barcodes⁷

Improved Traceability

When manufacturing thousands of products daily, manufacturers must know the location of the product batches. While 1D barcodes can only store a small stand of information (typically the product's part number), a 2D barcode can store more information, like the batch's assigned location, for increased traceability. With information stored directly in the barcode rather than a database over a network, manufacturers can conduct on-the-spot audits with a laptop and 2D scanner or a mobile computer.

Stronger Inventory Management

Like the point above, 2D barcodes can also store information like batch production dates, expiration dates, scheduled ship dates, the number of products in a batch, what assembly line it came off, etc. This heightened level of information improves the inventory management process.

Especially in the food industry, the ability to store more information about the product is invaluable. Expiry dates, allergens, and other relevant information can now be recorded and be read at all points of the value chain – including the end user.

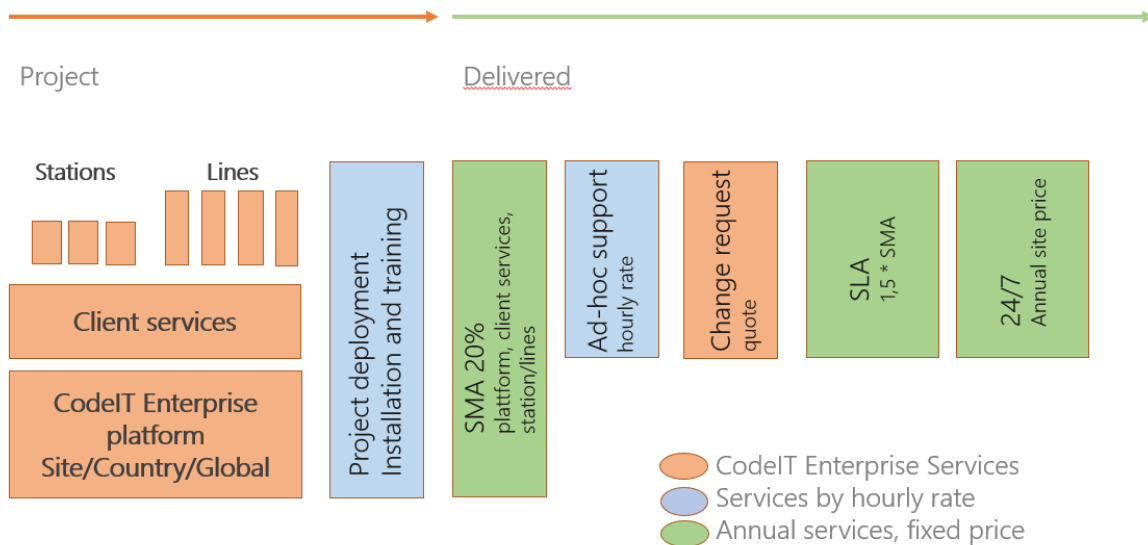
CodeIT has implemented the use of 2D barcodes in its solutions. The illustration below shows a 2D code printed on a zinc sample from a project CodeIT is working on with a Norwegian zinc production plant.



⁷ <https://www.l-tron.com/resource-page/breaking-benefits-2d-scanning/>

Conclusion

CodeIT is a very successful SBE, delivering solutions to satisfied customers in different sectors and countries. All deliveries are project-based, and pricing is as shown in the diagram below. This sums up their business model.



CodeIT Enterprise Services is priced in the contract as a combination of pricelist items and project-defined prices. Project deployment, installation, and training is estimated and based on an hourly rate. The rights to CodeIT Enterprise source code and created distributed software solutions are the sole property of CodeIT. It is mandatory to have a Software License and Maintenance Agreement to use CodeIT Enterprise.

The challenge

Bjørnar Torsnes: *We always look for new ways to improve things, but it is difficult to banish the attitude "Better the devil you know than the devil you don't."*

CodeIT's growth has come more from increasing the adoption rate of CodeIT Enterprise™ with existing users, adding new customer-driven product features for existing users, and less from establishing new clients. Both are important. The latter can be improved. CodeIT is a small organization that needs to be ultra-efficient and think out of the box. They must make the long-term financial benefits of using CodeIT Enterprise™ clear and comprehensible.

CodeIT's clients depend on them long-term, and CodeIT needs to be profitable. For existing and new CodeIT Enterprise™ clients, CodeIT has concluded that they need to adopt a new ARR business approach to secure stable revenue streams to finance world-class customer support and product development - to keep themselves and their clients on the leading edge of technology. This probably means they must rethink how they package and position CodeIT Enterprise™.

There is a pressing need to wean existing clients off the old CodeIT Enterprise™ all-in-one model of one-time implementation and perpetual software license fees and get them

on board with a comprehensive modular product ARR as a business model beneficial to both parties. CodeIT must present clients with an easy-to-understand ARR software and services model as a competitive advantage to old and new clients as soon as possible, and not least within their organization, primarily engineers happy with the existing CodeIT Enterprise™ business model. CodeIT has already started to offer a right-to-use and maintenance agreement (SMA) and supplementary Service Level Agreement (SLA) to new clients, but old habits die hard with seasoned sales and technical support professionals, and existing clients are happy because they think everything is included when it is not.

Goal

CodeIT Enterprise™ needs to be reborn like a Phoenix - with a complete, new ARR business model.

Your task

Tell CodeIT what they must do to transition swiftly to an ARR business model successfully.

Before you start working on your task you might want to watch the following video:
<https://vimeo.com/539074561>

Bjørnar Torsnes and his team at CodeIT are eagerly awaiting your solutions.

Good luck!