RULE THE BUSINESS

CUSTOMER SUCCESS CASEBOOK

INNORULES

Digital Decision Management PROJECT FOR SAMSUNG'S MES IN 39 FACTORIES

Time needed for launching a new product is curtailed to half

Global IT Leader

SAMSUNG Electronics is a massive global IT figure with more than 200 subsidiaries.

Samsung strives to uphold its position as the leader for promoting smart and convenient lifestyles by providing quality service and products. 29 factories all over the world are the basis of their international business.

"InnoRules has established and standardized the manufacturing system for mass production, which enabled centralized development and distribution, resulting in faster production processes. In short, market entry for Samsung electronics became easier and quicker"

From Samsung

OBJECTIVE

- Standardization of manufacturing process and integrated management
- Break away from localized system modifications
- Swift changes in manufacturing processes

BACKGROUND

Frequent changes in the product manufacturing process to keep up with local demand and ensure rapid launch

The manufacturing process at 39 plants around the world was individually tailored to suit the local manufacturing environment in which each plant was located, and as product launch cycles became shorter, business rule changes in the manufacturing process occurred frequently.

The manufacturing system gradually became more and more complicated and difficult to manage, which required standardization of the manufacturing management system and central management from the HQ.

Standardization of manufacturing process systems and manufacturing process rule sources as well as integrated management was required.

In response to these challenges, the Digital Decision Manager, InnoRules was adopted.

OUTCOME

75% productivity improvement

Reduced "manufacturing process" change period (1month -> 1 week)

Reduced to half

Shortened new product launch cycle (6 months 3 months)

1/2 Manpower

Centralized development and distribution improved legibility of business rules. As a result, reliance on labour was greatly reduced.

RESULT

Standardized manufacturing management system based on DDM.

By gathering the people in charge of the process specifications of each plant, we organized the manufacturing process rules and developed them as rules to establish G-MES(*), the standard international manufacturing management system of Samsung based on INNORULES' DDM engine.

Development and operation workforce reduced from 200 to 100

G-MES unified the source of manufacturing process rules that included all the individual responses of each plant and made centralized distribution possible.

Teams responsible for process changes and individual responses were unified into a single team with a unified work rule source. As a result, those in charge of controlling local plants were allotted to better jobs. Now only 100 people are doing what 200 people were doing.

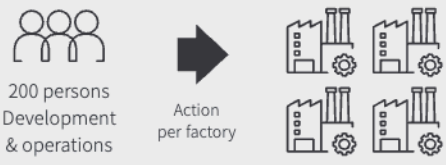
Shortend manufacturing preparation time from 1 month to 1 week, product launching from 6 to 3 months.

Time needed for changing the manufacturing process due to new product launches has been reduced to one week from one month by using the development and testing functions provided by innorules.

As a result, the release of a new product takes less than 3 months. Previously, it took 6 months.

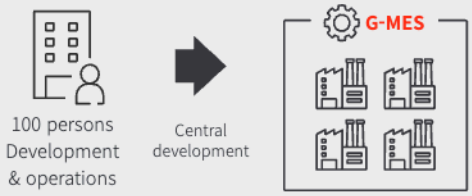
Manufacturing process management prior to BRMS

One manufacturing process designer and three developers worked as a team and total of four teams visited factories around the world to perform system modifications and applications.



G-MES

Thanks to the standardization of manufacturing management systems and the unification of business processes. Now, all modifications to business rules are carried out at the HQ and distributed and applied to each factory remotely.

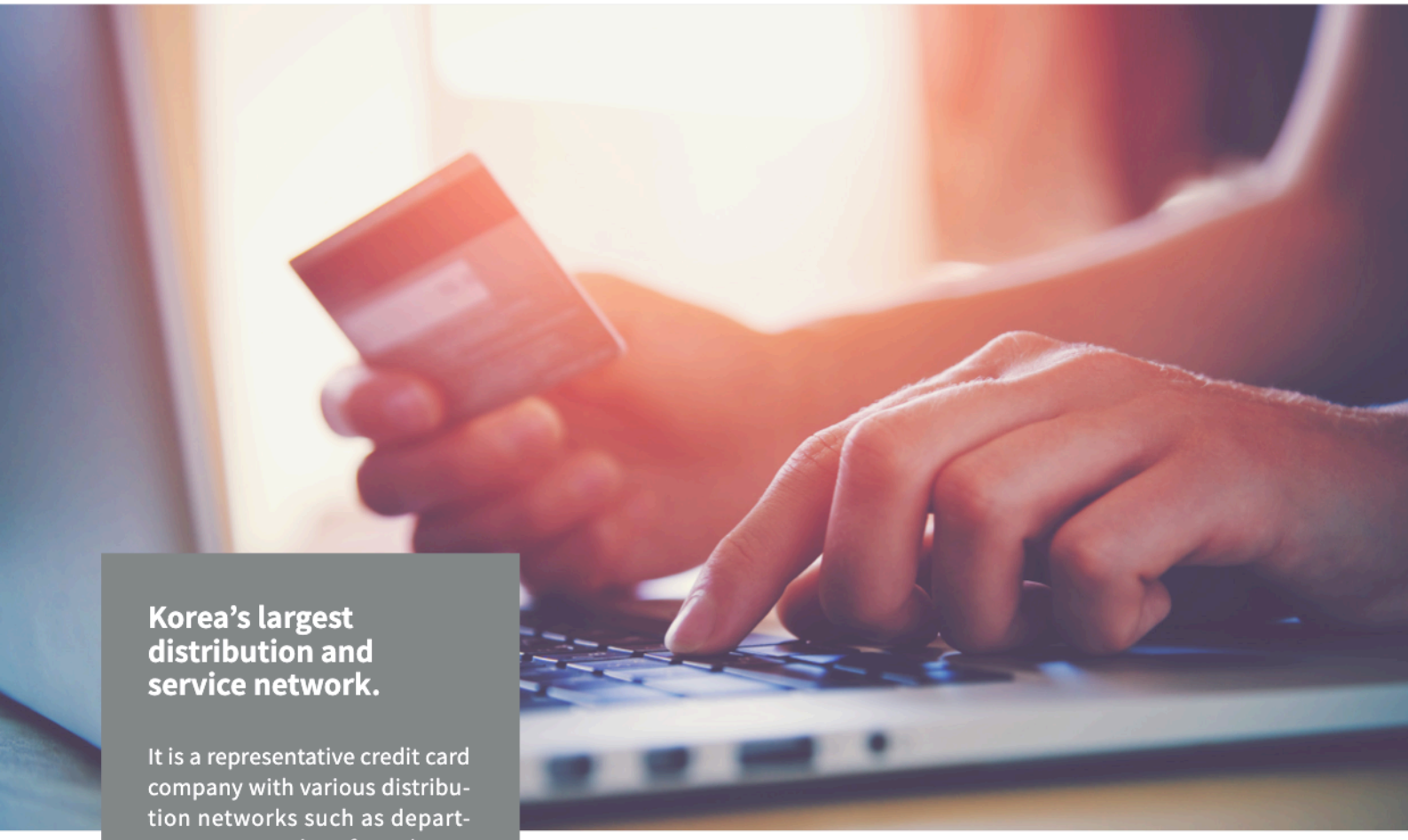


(*) G-MES (Global-Manufacturing Execution System) is a system that manages the entire production line and is a manufacturing management system applied to Samsung Electronics' factories all around the world.

LOTTECARD

CUSTOMER-CENTERED BUSINESS. PRECISE AND SWIFT RESPONSE.

Improved customer satisfaction by reducing business processing time and cutting unnecessary costs



Korea's largest distribution and service network.

It is a representative credit card company with various distribution networks such as department stores, duty free shops, movie theaters, convenience stores and home shopping.

It is continuously launching top class premium cards based on different lifestyles. It is known to have the finest asset quality in the industry.

"In the past, customer care was the most difficult job. Explaining why she/he wasn't getting the specific benefit/service required hours of analyzing logs. This often resulted in customer dissatisfaction. Right now, we can provide quick and accurate explanation without having to check all the logs."

Employee from Lotte Card

OBJECTIVE

- Improving service audit performance
- Improving customer satisfaction and reliability
- Avoiding wasteful work

BACKGROUND

Improvement in manual and repetitive work that consume a lot of IT resources

Service review is the task of reviewing the condition of the card service in detail when the card company approves of sales and determines what service to provide to customers.
Service review requires heavy IT resources. Development of modules and management per cases such as processing points, service audit, purchase audit were necessary.
In addition, performance was poor that only 200,000cases were handled in 10 hours.

Also, processing log files for 5 hours everytime a report for misapplication of service was received was rather time consuming not to mention increased customer dissatisfaction.
In the case of cancellation/repurchase, manual verification of the effect of cancellation/repurchase was prerequisite due to system limitation. The lack of automation of the system engendered wasteful task such as manual and repetitive work which made it difficult for both business and IT.

OUTCOME

90% Improvement

Reduced response time for service error inquires (5 hours→30 mins)

47 hours shortened

Shifting from manual to systematic process reduced cancellation /repurchase time (48 hours →1 hour)

Core business concentration

Eliminating unnecessary work

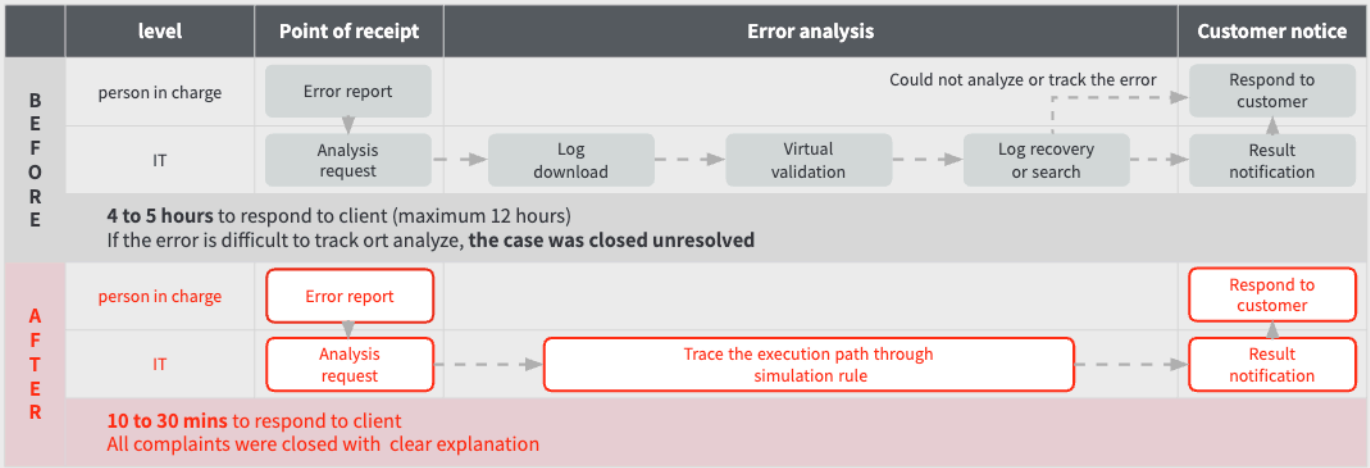
RESULT

Improved customer satisfaction through enhanced performance and fast response.

With InnoRules' Rule Builder Test function, one can check the input and output of each step without analyzing log files for hours. Furthermore, there is no such a thing as "unknown case."
The repurchase process after cancellation uses InnoRules' simulation function to accurately and quantitatively determine the scope of impact due to the cancellation process and then the cancellation / repurchase is processed as a batch.

When changing information of existing products or releasing new card products, you can simulate based on past sales information. This verification ensures operational stability and prevents business errors.
This streamlining of work has enabled cost savings across the enterprise by allowing business and IT managers to focus on their work rather than wasting time.

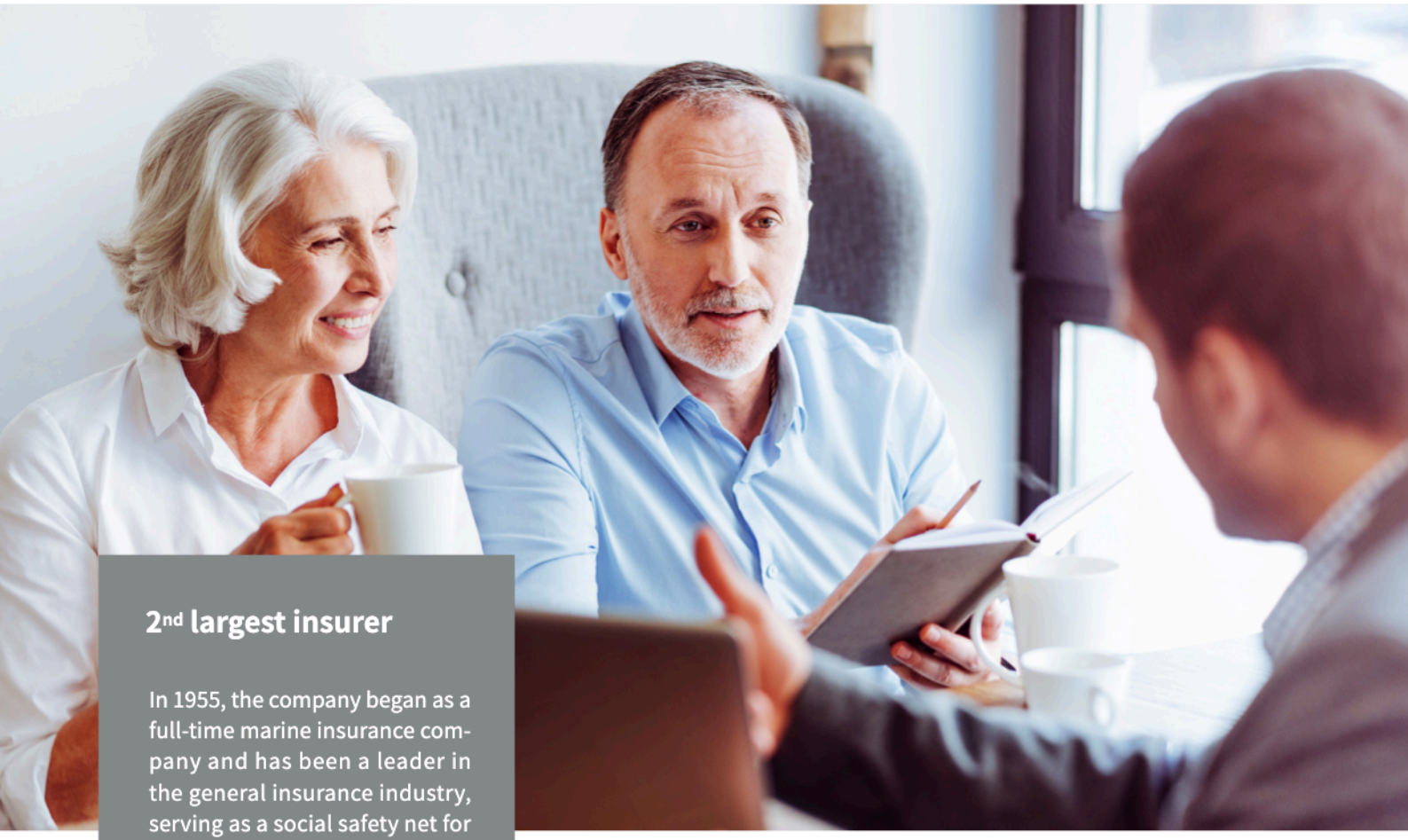
Customer handling process for triage error



Hyundai Insurance

SECURING COMPETITIVENESS BY IMPROVING BUSINESS PROCESS AND PRODUCT MANAGEMENT STRUCTURE

Launching a new product : 6months → 1month



2nd largest insurer

In 1955, the company began as a full-time marine insurance company and has been a leader in the general insurance industry, serving as a social safety net for all non-life insurance, including marine, fire, automobile, specialty, long-term, pension and retirement insurance (pensions).

Credit rating of "A(EXCELLENT)" from A.M.Best (※)

"We changed our application structure to a structure that makes it easy to develop new products by making our enterprise applications common to InnoRules and rebuilding them in recyclable units. Previously, we launched new products every 3–6 months, but now we launch new products every month."

Hyundai Insurance's system subsidiary

OBJECTIVE

- Integrated management of business rules
- Fast system development period

BACKGROUND

Shortened system development time and accurate impact analysis for rapid product launch

The necessity of developing a system that could help launch a new product was mainly due to the lack of integrated management of product information, but also the difficulty of analyzing the impact of new product. New product development requires one to three weeks if the same insurance items are reused, and two to six months for product development based on a combination of other insurance items. Annually only 15~30 insurance products were made.

It could not simply to keep up with the demand for new products.

OUTCOME

1/6 shortened

Shorten new product launch cycle (6months → 1month)

500% increase

Number of insurances launched per year

Lower reliance on IT

"Person in charge" oriented system

RESULT

Productivity increased by 500% anually

Categorized and standardized business rules in the smallest unit using InnoRules and InnoProduct. This integrated management of company-wide product standard information and business rules.

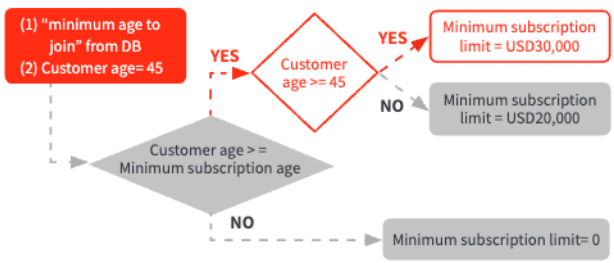
This system minimized the work by making it easy for the person in charge to modify the product standard information and business rules when modifying the existing product.

Also, by using the simulation function based on InnoRules, pre-profit analysis and development were possible.

Most of all, convenient functions such as integrated management of product standard information using InnoProduct and assembling/copying using product pool enable the person in charge of product development to independently develop new products within a short time.

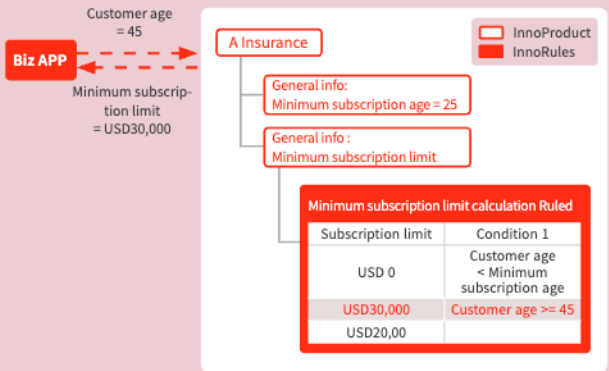
Car insurance business logic AS-IS & To-BE

AS-IS Business logic



In the business logic, the design of "pvroduct information" (minimum subscription age for insurance) and "business rules" (minimum subscription limit set according to customer age) are hardcoded. Harmonization and re-use of rules are limited and also application change is inevitable.

TO-BE Business logic



All standard information and logic of InnoProduct insurance products can be integrated and managed.

※ A.M.Best : Credit rating agency for insurance industry
※ PF(Product Factory) : InnoProduct is a standard information management SW package.

* HIS: Hospital Information System

SAMSUNG MEDICAL CENTER

EFFECTIVE AND FLEXIBLE INTELLIGENT HOSPITAL INFORMATION SYSTEM BASED ON DDM

The time needed for applying changes to HIS was reduced drastically while reducing error rates significantly

Korea's No.1 medical center

SAMSUNG MEDICAL CENTER is Koreas' one of the largest medical center with over 2,000 beds.

Samsung Medical Center has been nominated the first place in the National Customer Satisfaction Index (NCSI) 14 times, first place in the Korean Customer Satisfaction Index (KCSI) 16 times.

"Due to the lack of expertise in medical knowledge we used to have difficulties in communicating with medical staff. This eventually caused a huge delay in the development process. Now that we have InnoRules integrated into our system, communication between IT and medical staff is swift and effective."

SAMSUNG MEDICAL CENTER

OBJECTIVE

- Medical knowledge based rule arrangement (Implicit → Explicit)
- Improved patient safety
- Better medical care
- Improved work efficiency

BACKGROUND

Characteristics of medical industry

- Specialized knowledge is required due to the nature of business and this often prolongs work adaptation time needed for an IT person
- Difficult to reflect program revision due to continuously changing policy

System operation issues

- Difficult to respond quickly to frequently asked requirements such as insurance review and adequacy assessment
- Due to frequent program changes and long-term maintenance, many hard codings exist and work readability is reduced
- Difficulty in understanding the impact of modifying the program

OUTCOME

Improved inter-group communication

Instant application of changes to the system

Significantly reduced debugging time

RESULT

As a result of applying DDM to a number of tasks such as prescriptions and medical billing, we witnessed improvement in logic visibility, development speed and verification process.

Improved logic visibility

Existing program had a lot of hard coding due to frequent changes and long-term maintenance. As a result, the visibility of logic was reduced, which made it difficult for developers to understand.

After introducing DDM, man in charge would intuitively understand business logic by writing rules as they were used in business.

By applying the rules medical & non-medical staff, and developers could easily share medical guidelines or related knowledge, and improve the overall understanding of the work.

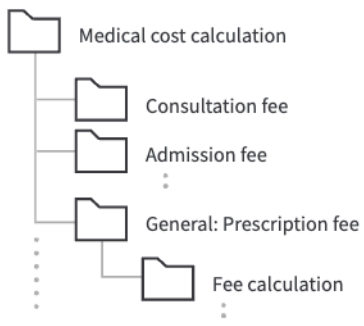
Easy verification and fast development

DDM's versatile testing capability enables quicker application of changes made to medical guidelines and policies compared to traditional programming implementations.

Debugging in programming is not easy so the verification of the result. But, after introducing BRMS, it became possible to check the execution path of rules using trace/track function and the output value of each rule. InnoRules made all easy.

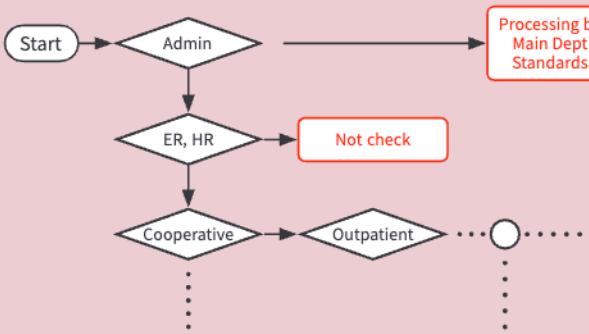
The hierarchical work structure and the intuitive representation of the work flow using Flow Rules enhance the overall understanding of the maintenance work by increasing the readability of complex and maintenance-based medical billing tasks.

Explorer hierarchical structure



Tasks are organized hierarchically and systematically making it easier to identify and define the dependencies among tasks

Easy to understand the flow of work using Flow Rule



The process of calculating medical expenses is expressed in a flow chart composed of business language so that both business and IT can easily understand the work, enabling smooth communication.

Hanwha Hotels&Resorts

FLEXIBLE PRODUCT INFORMATION SYSTEM

The efficient data management system brought reservation and administration of the amusement centers to another level, fostering the business.

Leading figure in Korean resort industry

Hanwha Hotels & Resorts, a major player in Korea's resort industry, owns a 410-guestroom luxury boutique hotel and the largest condominium chain across 12 properties with a total of over 4,800 guestrooms.

We were struggling to keep up with the demand for changes from our customers. With the existing system, it was impossible to deliver what customers desired. INNORULES enabled us to instill order within our existing system so that keeping up to customers' requests became manageable.

Employee from Hanwha

OBJECTIVE

- Building a flexible product information system that could seamlessly respond to changing customer needs.
- Building a scalable product information system that could cope with fast business expansion.

BACKGROUND

New packages and product bundles were in need to meet the diverse customer needs

Everyone has a unique life style.
Modernity in our society has resulted in constant demand for changes and hotel business is at the forefront of fulfilling diverse trends.

Hanwha Resort realized that it was unavoidable, in order to stay in the business, to offer their guests unique and personalized experience. What she needed was a flexible and scalable system that could launch new packages in a timely manner.

OUTCOME

80% reduction

Time needed for production of a package reduced from 5 weeks to 1 week

90% increase in business efficiency

Package price data is reduced to less than 10 from thousands

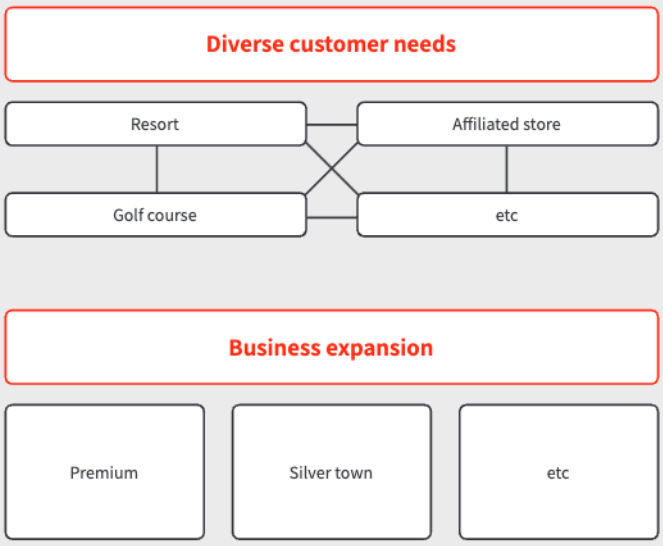
Automating pricing structure and modeling simplified work process

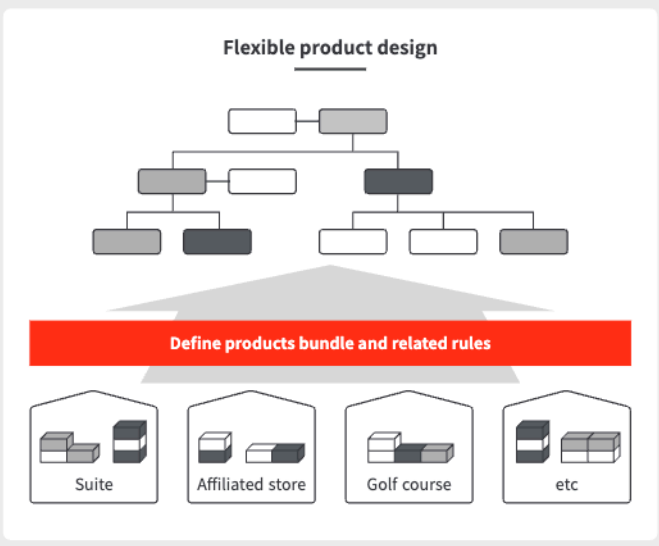
RESULT

InnoRules and InnoProducts standardized product information to enable systematic management. It also eliminated unnecessary data generation as product information became recyclable. Hanhwa resort can make new products by combining registered product information and product pool. The time and effort required to launch a new product has been dramatically reduced, and what's amazing about is that there was no need for development or programming.

With the help of InnoRules and InnoProduct, Hanwha Resort is able to launch new products swiftly according to customer needs at a minimum cost.

Establish a product factory that responds flexibly and quickly to changes in the external environment





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