FORTRESS INNOVATION

Fortress Innovation, an affiliate of Kyobo Life Insurance, provides optimal solutions and consulting services backed by its solid experience in building financial systems.

We strive to become the global No. 1 insurance actuarial platform through continuous technological development.

SOLUTION

Introducing InnoLinc and ExcelBooster, designed to provide fast processing through innovative and fast data analysis.

InnoLinc
WHAT YOU LINK IS WHAT YOU GET
1
A parallel computing platform optimized for insurance industry

ExcelBooster®
2
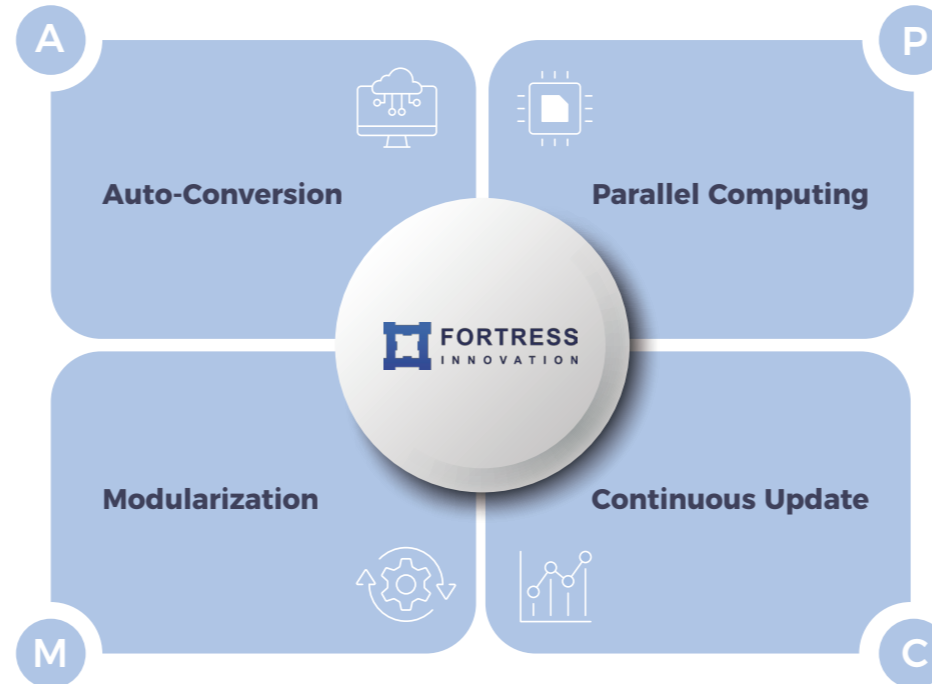A solution that provides convenient environment based on MS Excel

Reduces work time, accelerates decision-making
TIME SAVING.

Experience our solution by watching videos.

Reduces the work time, accelerates the decision-making
Less time, Faster decisions

A Auto-Conversion

P Parallel Computing

FORTRESS
INNOVATION

M Modularization

C Continuous Update

www.fortinno.com

Head office
Fortress Innovation Co., Ltd
3F 25, Hangang-daero 23-gil, Yongsan-gu, Seoul, South Korea

Daejeon Research Center
305, Building D, Daedeok Business Center,
684, Gwanpyeong-dong, Yuseong-gu, Daejeon, South Korea

Contact
+82 02-6272-0152
contact@fortinno.com

Visit website

FORTRESS
INNOVATION

Solve problems
in innovative ways

PROBLEM SOLVING

Fortress Innovation provides innovative solutions by focusing on problems in business practices.

The traditional solutions used in actuarial insurance industry are complex and fail to deliver fast processing speeds.

Fortress Innovation recognized the need for solutions to address the problems occurring in business practices, with a focus on enabling more efficient business operations and decision-making.
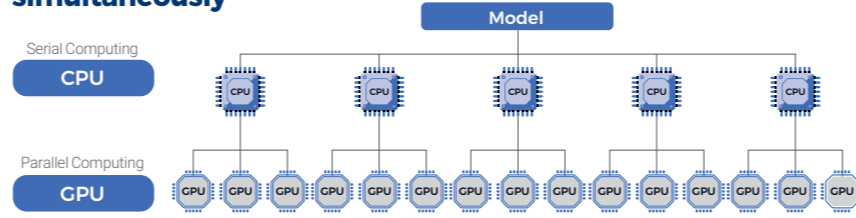
CLIENT

We have been continuously implementing diverse innovative projects with various insurance agencies.

KYOBO 교보생명

lifeplanet 교보라이프플래닛생명

H 현대해상

NH농협손해보험

흥국화재

KB손해보험

한화손해보험
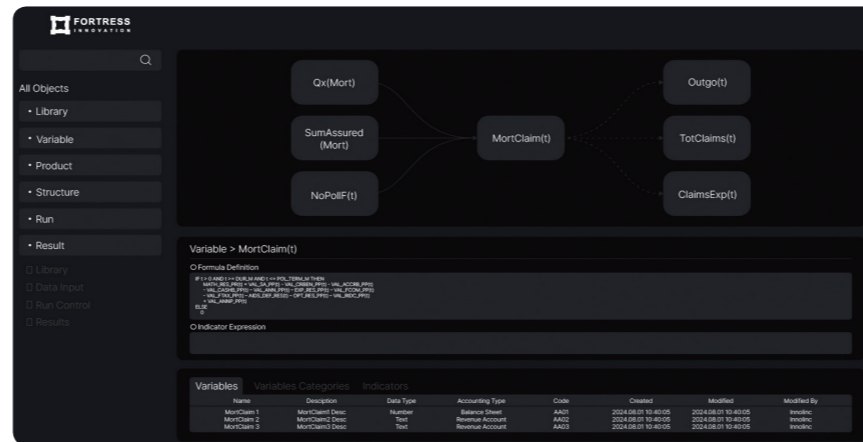
하나생명

InnoLinc I Solution

InnoLinc is the best parallel processing platform which can be applied in insurance industry.
Users can understand the entire structure easily through our program structure module's diagram.

Offers strong computing capability using both CPU and GPU simultaneously

Model

Serial Computing
CPU

CPU CPU CPU CPU CPU

Parallel Computing
GPU

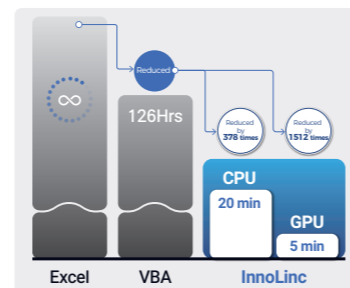GPU GPU GPU GPU GPU GPU GPU GPU GPU GPU GPU GPU GPU GPU GPU

Expands modeling convenience through diagrammatic presentation

Enables a visual, detailed understanding of the flow of data and models at a glance. Also, it is easy for program development and modification along with flexibility and expandability since multiple users can work simultaneously through a rule-based system structure.

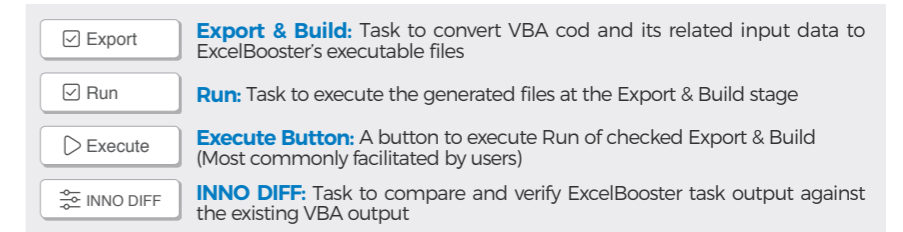## Improved processing speed up to 1,512 times compared to existing programs

InnoLinc dramatically reduces computing time compared to existing actuarial software and VBA programs.
Furthermore, it provides a better experience with higher efficiency when the CPU and GPU are used together at certain stages of the computing process.

126Hrs

CPU
20 min

GPU
5 min

Excel   VBA   InnoLinc

ExcelBooster I Solution

"ExcelBooster" of Fortress Innovation provides user interface since implemented as a revamped menu in MS Excel.
Additionally, it is software with exceptional processing speed faster than ever, to improve task efficiency without any modifications to client's existing VBA.
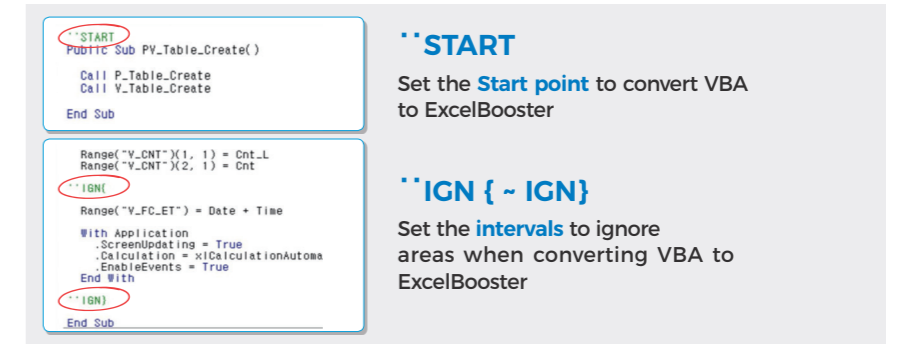
Simple and easy-to-follow structure as an add-in in MS Excel

ExcelBooster is accessible as a menu in MS Excel allowing users to work with a Run button without additional training.
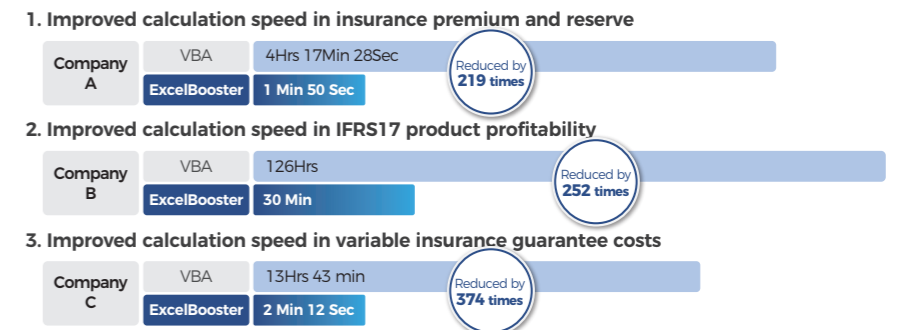
☑ Export	**Export & Build:** Task to convert VBA cod and its related input data to ExcelBooster's executable files
☑ Run	**Run:** Task to execute the generated files at the Export & Build stage
▷ Execute	**Execute Button:** A button to execute Run of checked Export & Build (Most commonly facilitated by users)
⇅ INNO DIFF	**INNO DIFF:** Task to compare and verify ExcelBooster task output against the existing VBA output

Simple conversion without any VBA modifications

Add just 2 commands to easily run ExcelBooster without any modifications to the existing VBA code

```
''START
Public Sub PY_Table_Create()

    Call P_Table_Create
    Call V_Table_Create

End Sub

Range("V_CNT")(1, 1) = Cnt_L
Range("V_CNT")(2, 1) = Cnt
''IGN{
    Range("V_FC_ET") = Date + Time

With Application
    .ScreenUpdating = True
    .Calculation = xlCalculationAutoma
    .EnableEvents = True
End With
''IGN}

End Sub
```

''START
Set the **Start point** to convert VBA to ExcelBooster

''IGN { ~ IGN}
Set the **intervals** to ignore areas when converting VBA to ExcelBooster

The processing speed compared to the existing program improved by up to 374 times

ExcelBooster achieved the following improvements in speed within actual insurance sector

1. Improved calculation speed in insurance premium and reserve

Company A	VBA	4Hrs 17Min 28Sec	Reduced by **219 times**
	ExcelBooster	1 Min 50 Sec	

2. Improved calculation speed in IFRS17 product profitability

Company B	VBA	126Hrs	Reduced by **252 times**
	ExcelBooster	30 Min	

3. Improved calculation speed in variable insurance guarantee costs

Company C	VBA	13Hrs 43 min	Reduced by **374 times**
	ExcelBooster	2 Min 12 Sec	

FORTRESS
INNOVATION

Fortress Innovation, an affiliate of Kyobo Life Group, provides the optimal insurance solution and consulting service based on extensive experience in building financial systems.

We are the only insurance actuarial solution provider in Korea. and we continuously develop products, striving to become the world's No.1 actuarial insurance platform.

CASE STUDY

Fortress Innovation has made significant research advancements and achievements including the followings as we are currently working together with several insurance companies.
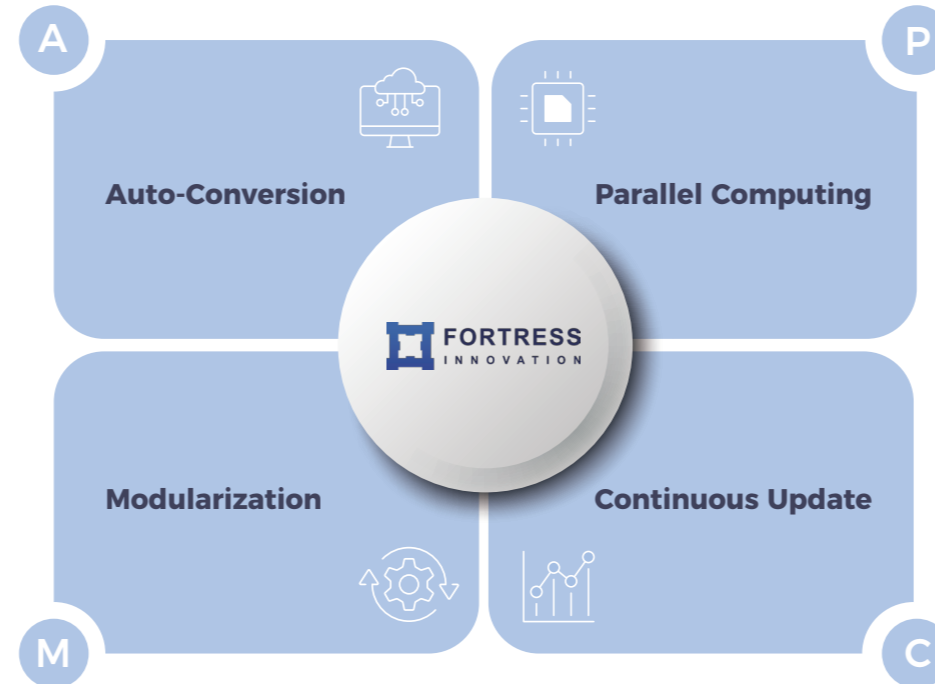
Speed improved in computing insurance premium and insurance policy reserves
(Speed reduced by average 150 times)

Speed improved in computing IFRS17 product profitability
(Speed reduced by average 200 times)

Speed improved in computing variable insurance guarantee costs
(Reduced by average 40 times)

Speed improved in Actuarial Audit
(Speed reduced by average 40 times)

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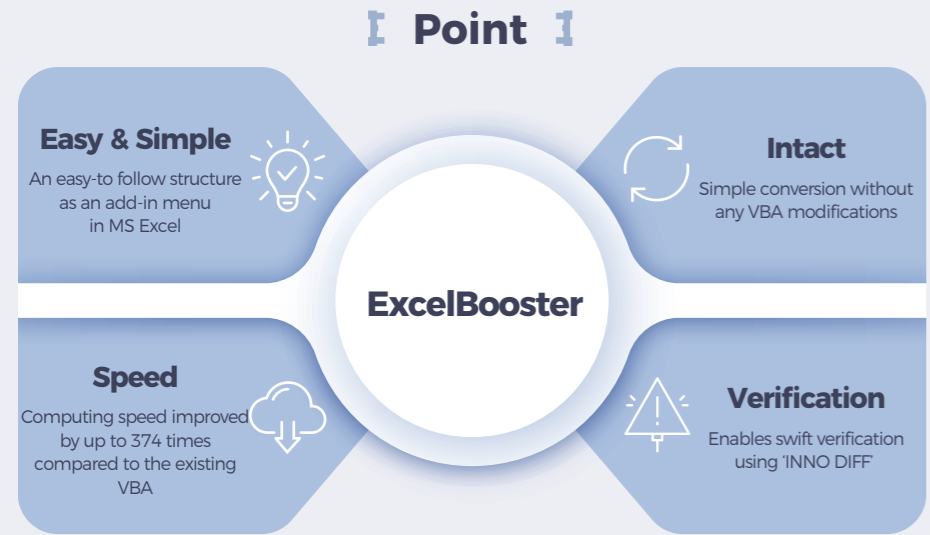# Excel Booster ®

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INNOVATION

Solution that offers significant improvements in speed
as an add-in menu on MS Excel

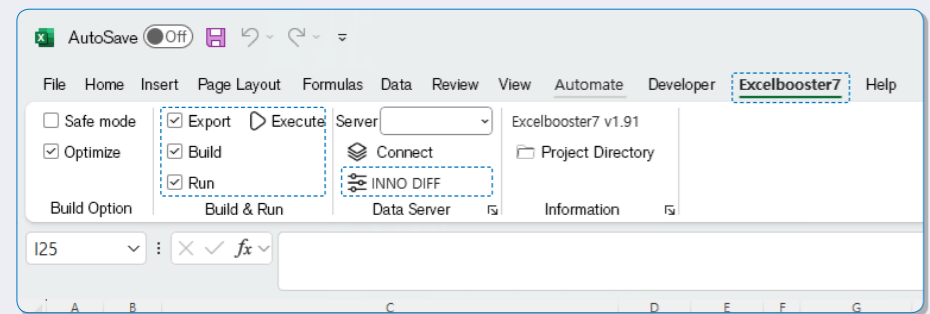Solve problems
in innovative ways

ExcelBooster I Solution

ExcelBooster of Fortress Innovation provides a convenient user interface(UI) as implemented as a revamped menu to MS Excel.
Additionally, it is software with exceptional processing speed, faster than ever to improve task efficiency without any modifications to client's existing VBA.

Point

Easy & Simple
An easy-to follow structure as an add-in menu in MS Excel

Intact
Simple conversion without any VBA modifications

ExcelBooster

Speed
Computing speed improved by up to 374 times compared to the existing VBA

Verification
Enables swift verification using 'INNO DIFF'

ExcelBooster in Excel

Point1. Easy & Simple

An easy-to-follow structure as an add-in menu in MS Excel

ExcelBooster is accessible as a menu in MS Excel allowing users to work with a Run button with no additional training.

☑ Export	**Export & Build**	Task to convert VBA cod and its related input data to ExcelBooster's executable files
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⚏ INNO DIFF	**INNO DIFF**	Task to compare and verify ExcelBooster task output against the existing VBA output

Point2. Intact

Simple conversion without any VBA modifications

Add just 2 commands to easily run ExcelBooster without any modifications in the existing VBA code.

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Public Sub PY_Table_Create( )

    Call P_Table_Create
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''START
Set the **Start point** to convert VBA to ExcelBooster

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    Range("V_CNT")(1, 1) = Cnt_L
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    With Application
        .ScreenUpdating = True
        .Calculation = xlCalculationAutoma
        .EnableEvents = True
    End With
''IGN}

End Sub
```

''IGN { ~ IGN}
Set the **intervals** to ignore areas when converting VBA to ExcelBooster

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Point3. Speed

The execution speed compared to the existing VBA program improved by up to 374 times

ExcelBooster reduced calculation time by 219 times in computing insurance premium and reserve, 252 times in IFRS17 product profitability and 374 times in variable insurance guarantee costs in comparison with the current VBA output.

1. Improved calculation speed in insurance premium and reserve

Company A	VBA	4Hrs 17Min 28Sec	Reduced by **219 times**
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2. Improved calculation speed in IFRS17 product profitability

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Company C	VBA	13Hrs 43 min	Reduced by **374 times**
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Point4. Verification

Enables swift verification using 'INNO DIFF'

Enables swift verification of outputs from existing VBA and ExcelBooster using the simple 'INNO DIFF' function after the calculations are completed.

1 File1 Open
Select standard data :
Set existing client's VBA result output files

2 File2 Open
Select comparison data :
Set ExcelBooster output files

3 Execute Verification
Verification proceeds with a clock of DIFF button

4 Confirm verification output
Complete verification with values matching "Total diff : 0"