

Zurich uses EASA to deploy critical spreadsheets as web applications. This secures confidentiality and removes risk, while making pricing models accessible to authorized users.

*"The problem we were trying to solve was challenging, but EASA was flexible enough to meet our needs. In the future, we will rely on EASA even more ...."*

Nemanja Kostic, IT Solution Architect  
Zurich Insurance Company Ltd.



*Zurich Financial Services is one of the world's largest insurance groups, operating on a truly global basis. With customers in over 170 countries, Zurich offers a range of insurance products for individuals and businesses.*

#### **Problem: How do you securely distribute spreadsheets used for product pricing?**

It's a common enough scenario in any industry: spreadsheets used for product pricing...

In the insurance sector, Excel® is widely used to create complex pricing tools for products and services because it is a fast and flexible platform. In fact, spreadsheets are often preferred to "hard-code", because actuaries need to make frequent changes to calculations and business logic to reflect market fluctuations and actuarial adjustments.

Insurance rating is a specific example. It's a critical one because the calculations and business logic embedded in rating models can contribute directly to the company's bottom line.

It's therefore vital that the authorized owner of a spreadsheet has access to maintain it – but equally vital that end-users **only** have access to the model's functionality. The algorithms and methods embedded are key intellectual property - they must be applied correctly and protected from unauthorized distribution.

#### **Solution: Use EASA to web-enable, secure, and deploy spreadsheets to your team.**

EASA enables ultra-rapid creation of web-based applications which leverage existing assets such as spreadsheets, databases, web-services, and legacy tools. Zurich has seen benefits including:

- € The custom web applications which replace "raw" spreadsheets are so intuitive that end-user training is no longer required
- € End-users can only access the correct "certified" version of a spreadsheet, ensuring consistent pricing for customers
- € If a change is required, it is made by the authorized "owner", and is immediately published to end-users
- € Confidential models and data embedded in key spreadsheets are protected
- € Integration with other systems such as databases and web-services is enabled
- € An audit trail of past usage is available

Other options considered and rejected include:

- ❑ The wholesale replacement of spreadsheets with custom applications - however, this approach is expensive and time-consuming
- ❑ Simply "locking-down" spreadsheets - but this is an obstacle to authorized updates, and does not help with the usage issues
- ❑ Spreadsheet collaboration products such as Excel Services - however, most cannot support spreadsheets with complex functions and macros, while EASA does.

EASA enables Zurich to secure a master version of a given spreadsheet on a server. Authorized access is only via a custom web application created with EASA's codeless application builder, allowing a more natural work-flow.

Even spreadsheets with add-ins or macros can be deployed, because EASA runs Excel natively, in contrast to Excel Services.

In the future the system can be extended to provide access for mobile users.

The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E	F	G	H	I
1		Min age:		0363	0364	0373	SSM	SSF	
2			5	A-2000 Male	A-2000 Female	A-2000 MGM	Soc. Sec.	Soc. Sec.	2000-Female
3		Max age:	5	0.000291	0.000171	0.000232533	0.000200	0.000170	
4			6	0.000270	0.000141	0.000207145	0.000190	0.000150	
5			7	0.000257	0.000118	0.000189268	0.000180	0.000140	
6	Number	Table name	8	0.000294	0.000118	0.000208232	0.000170	0.000130	
7	0363	A-2000 Male	9	0.000325	0.000121	0.000225578	0.000140	0.000120	
8	0364	A-2000 Female	10	0.000350	0.000126	0.000240819	0.000130	0.000120	
9	0373	A-2000 MGM	11	0.000371	0.000133	0.000254982	0.000130	0.000120	
10	SSM	Soc. Sec. 2000-Male	12	0.000388	0.000142	0.000268068	0.000190	0.000140	
11	SSF	Soc. Sec. 2000-Female	13	0.000402	0.000152	0.000280102	0.000310	0.000190	
12			14	0.000414	0.000164	0.000292087	0.000470	0.000240	
13			15	0.000425	0.000177	0.000304047	0.000640	0.000310	
14			16	0.000437	0.000190	0.000316519	0.000810	0.000370	
15			17	0.000449	0.000204	0.000329479	0.000960	0.000410	
16			18	0.000463	0.000219	0.000343952	0.001080	0.000440	
17			19	0.000480	0.000234	0.000359962	0.001170	0.000450	
18			20	0.000499	0.000250	0.000377482	0.001270	0.000450	
19			21	0.000519	0.000265	0.000395026	0.001360	0.000460	
20			22	0.000542	0.000281	0.000414593	0.001410	0.000470	

## BEFORE:

A typical spreadsheet used for actuarial calculations, the basis for insurance product pricing.

Deployment in its "raw" form is problematic - use of incorrect versions, unauthorized local changes, and lack of security for intellectual property contained in the spreadsheet.

The screenshot shows a web application interface for Zurich Financial Services. The main content is a table with the following data:

Rating	Name	2007	2006	2005
AAA	Auditors	200713	200613	200513
AAA	Clients dependency	200712	200612	200512
AAA	Credit rating	200716	200616	200516
AAA	EBITDA	20072	20062	20052
AAA	Industry Code Y...	20077	20067	20057
AAA	Interest Expense	20073	20063	20053
AAA	Order backlog	200710	200610	200510
AAA	Product or region...	20079	20069	20059
AAA	Qualitative Asses...	0	0	0
AAA	Qualitative rating	200715	200615	200515
AAA	Rating capped b...	200717	200617	200517
AAA	Revenues	20071	20061	20051
AAA	Standalone finan...	200714	200614	200514
AAA	Suppliers depend...	200711	200611	200511
AAA	Total Assets	20074	20064	20054
AAA	Total Debts	20076	20066	20056
AAA	Total liabilities	20075	20065	20055

## AFTER:

A web-based application, rapidly created with EASA's codeless application builder, is far easier to deploy and use. It leverages the existing spreadsheet and the business intelligence already embedded in it, eliminates usage errors, and ensures use of only the correct spreadsheet.