**INDUSTRY OPINION: Mark Norton, Product Director, Idiom Ltd.**

# The anatomy of an insurance product
## How comprehensive automation is making microinsurance viable

Mark Norton,
Idiom Product Director

### Introduction

Brandon Mathews' recent Industry Opinion article used the great metaphor of a "safety harness" to describe insurance. But what does this insurance "safety harness" look like, and how do we create one? In this article we will explore in more detail what this "safety harness" is made of, and equally importantly, how it is implemented and delivered.

One definition of insurance says that "Insurance is a form of risk management primarily used to hedge against the risk of a loss". Regardless of what definition we use, insurance is an abstract concept defined in abstract terms. The issue is to find a way to make this abstract concept both concrete and precise.

### Introducing rules

If we dissect an insurance product, we find at its core a set of rules. Rules appear at the very beginning of the sales cycle for an insurance product to check the data that is entered on an insurance application form. Next, more rules determine whether the data describes an insurable event that is covered by the product. When these rules determine that we actually have a 'risk' as defined by the product, then we apply additional rules to determine what specific terms and conditions apply to this particular 'risk' based on its characteristics. Finally, having determined that the risk is covered, rules are then used to determine the premium. In some cases, rules are also used to generate a

contract document – that is, a policy or insurance certificate.

From a technology perspective, more than anything else an insurance product is a set of rules. Even a simple product will have many rules. Each of these rules must be clearly defined and declared in an insurance product's legal documents so that they can be formally agreed between the insurer and its customers – and as Brandon's article observed, it is fundamentally important that they also be represented fairly and in an accessible language to the buying customer.

Ultimately, rules have many representations depending on who they are targeted at – including the buyer, the agent, the underwriter, the lawyer, the regulator, the auditor – and the computer.

In today's market, reducing administrative costs are key – and not just for high volume, low margin micro insurance products. This requires a high degree of automation of the insurance cycle, which in turn means that we must automate the insurance product and its delivery. More precisely, we must automate the insurance product rules, putting them in a precise language that is useable by a computer system. Without this, low-cost insurance is very difficult to deliver.

The automation of a wide variety of unique micro products that reflect the diverse needs of local communities worldwide is a challenge for any insurance technology provider. The challenge increases when we go on to deliver these products through remote and sometimes basic infrastructure, while maintaining industrial strength accuracy, throughput and reliability, all within the constraints imposed by operating at the extremes of cost effectiveness.

### Business rules and the "decisioning" approach

This is the challenge that MicroEnsure faces daily. With activities underway or planned in 16 countries, MicroEnsure's products need to deal with a diverse set of local regulations and market requirements, all of which are growing in complexity and sophistication as its customer's needs mature and deepen.
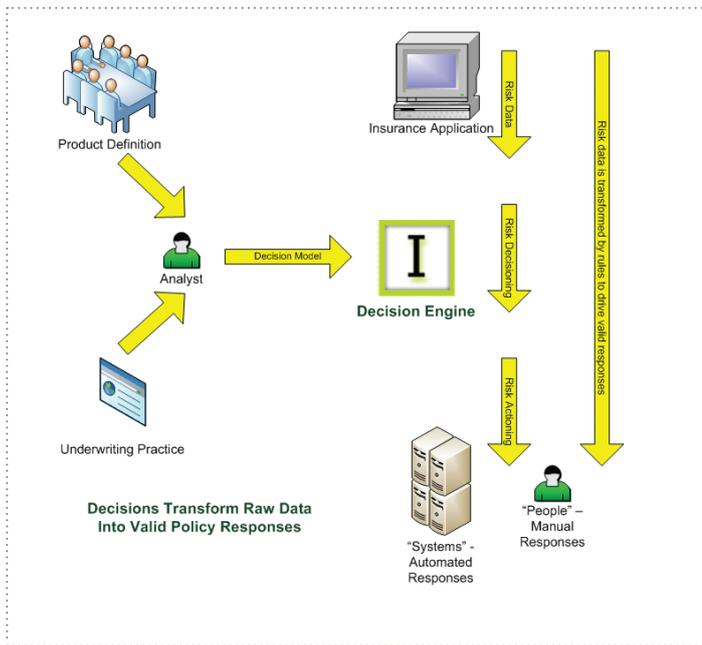
This product and regulatory complexity translates into a key concern for MicroEnsure's software developers – a plethora of business rules that are interwoven in a complex matrix across jurisdiction, channel, customer, and product. These business rules change regularly as each of these matrix elements adjust to various circumstances: jurisdictional rules change with each new regulation; channel rules change as the sales agents adjust to market conditions; customer rules change as social and environmental issues drive new customer needs and behavior; and product rules change as the insurers strive to offer meaningful and profitable products to rapidly changing markets. These many changes over time add an important time-sensitive dimension to the already complex rules matrix.

These changes, which are often imposed on the insurer, clash head-on with the ordered world of software development schedules, which are usually measured in months or years.

The answer to this conflict is to remove business rules from the system and manage them as you would any other content. This is the promise of 'decisioning' – defining computerized decision making outside of the traditional system, so that it can be

Decisions Transform Raw Data Into Valid Policy Responses

independently managed according to market needs and schedules.

What is a decision model? In an insurance context, a decision is the result of applying business rules to various risk factors to arrive at a desired conclusion, such as an agreement to underwrite, or an insurance rate. An insurance product will include many related decisions that must all work in concert to drive the underwriting and rating of an insurance sale. A 'decision model' is a model that describes all of the relevant decisions in terms of their internal rules, and in terms of the relationships between the decisions that orchestrate the decision making.

It is critical that a business analyst – not a programmer – uses a business rules tool to build the decision models. The resulting decision models are the core 'intellectual property' of the insurance business. Such a business rules tool should allow business analysts to capture, test, and document decision models. But equally importantly, it must also then generate and deploy the computer code that implements the models so that the decisions specified by the business analyst are not lost in translation to a developer or other technologist.

Of course there is much more to an operational business computer system than just decision models. But unlike decision models, the greater majority of a computer system is generic and relatively static, and requires little maintenance during those multi-year development cycles that are the bread and butter of traditional software development. The decision model is the key value-add of the computer system, allowing major, rapid automation and the cost savings needed to operate efficiently and effectively.

## MicroEnsure and Idiom

Idiom Ltd has now provided decisioning technology that has been plugged into MicroEnsure's major systems. It can be used by MicroEnsure's business analysts at diverse locations to describe locally relevant insurance products in terms of decision models.

MicroEnsure is using Idiom to automate many different parts of its systems. It has already adapted its core Temenos T24/eMerge back-end system to be 'decision driven' – a non-trivial development exercise that, now completed, is being leveraged with the first release of a decision driven product.

However, the back-end system is not the complete picture. Because of expensive and uncertain local telecom networks, local offices run stand-alone on smaller scale architectures, including personal and desktop machines. The same business rules need to be executed in remote sites around the world, wherever insurance needs to be done.

Idiom's ability to generate computer code for any platform is the key to ensuring that all business rules in all systems operate exactly the same way, without additional development effort. MicroEnsure's business managers link in to this single view of business rules, with system generated, business readable documentation presenting exactly the same rules for a business audience as it does to the computer.

When the critical business knowledge that drives MicroEnsure's business transactions is managed with decision models rather than being hardcoded into multiple platforms, it can be easily refined, expanded and adapted as the business responds to new conditions. The business becomes more agile, able to respond to new regulations and changing market needs more quickly and at lower cost.

And with the product decision model at the core, it becomes easier to build other automated decision driven components such as intelligent forms and automated document construction to complete the automation of the insurance product.

These aspects of product automation are much more than technological gimmicks or mere cost savers. Ultimately, micro finance and micro insurance relies on effective, low cost process automation in order to make viable, low-cost products that can serve the poor.

Richard Stafford, Idiom CEO, concludes "Insurance product decision models are a practically invisible piece of technology from a client or even a system user perspective. But Idiom generated code will be working 24x7 within MicroEnsure to help bring the best of micro insurance products to MicroEnsure's clients worldwide."