

INONI RES Case Study

Organisation:	Utility Supply Authority
Objective:	BIA and BC Strategy selection
Scope:	Single city location, 150 staff
Timeframe:	September to November 2007
Status:	Review of BCM taking place
Findings:	RES allowed accurate simulation of scenarios and impacts Hybrid IT replication saved money and reduced risk

This organisation is answerable to multiple industry participants and is required by them to uphold strict codes of governance, which include effective business continuity management. As part of a periodic review, INONI was invited to produce and present the next generation of Business Impact Analysis (BIA) and propose a new Business Continuity Strategy (BCS) to reflect the organisation's rapidly evolving operation, infrastructure and technology.

The project objective included producing a time-lapse simulation of the business, automatically generating Recovery Time Objectives (RTOs) for all services, assets and supplies, and accurately reflecting stakeholder tolerance to disruption under different seasonal conditions. A second objective was to use the model to compare the effectiveness of alternative strategies and identify which was the most appropriate and cost-effective under the circumstances. The project's third objective was to be able to reflect future changes and re-run the model with minimum intervention and in so doing, update both the BIA and BC Strategy data.

The project began conventionally with a presentation to management followed by site inspection and a series of one-to-one meetings with key personnel. INONI's consultants collected a substantial body of stakeholder, asset and dependency data, organisation charts, industry and IT systems information, customer characteristics and copies of current business continuity and disaster recovery plans. This information was input into RES via its graphical user interface, with each business entity or asset represented as a RES Node.

A part of this analysis involved assessing each stakeholder's tolerance to loss of service and how and when the organisation might be harmed if this threshold was exceeded. This data was represented in RES as hard (i.e. non-calculated) service level impact profiles. Composite impacts and seasonal and intra-day variations were similarly recorded, giving rise to a unique profile for the organisation, covering all impact types. Note that the subject organisation in this case was a not-for-profit concern and this was reflected in its impact profile, placing emphasis on reputation, legal, staff, productivity and funding impacts. RES provides the ability to record

intangible aspects such as these as indices or if appropriate, assign financial values to any or all impact types.

In general, restoring services to customers in acceptable timeframes means underlying business and operational components also need to be restored in pre-determined sequence. To reflect this, RES requires evaluation and input of interdependencies within the organisation and externally into the supply chain. These links were integrated with the stakeholder and service model and categorised into 'layers' as Stakeholders, Processes, Data and information, Applications, Computer systems and communications, Infrastructure or Suppliers. These layers are populated with RES entities or nodes and linked with dependencies to reflect actual relationships within the organisation. Failures affecting any node flow up through the model, depleting services to stakeholders and ultimately attracting impact.

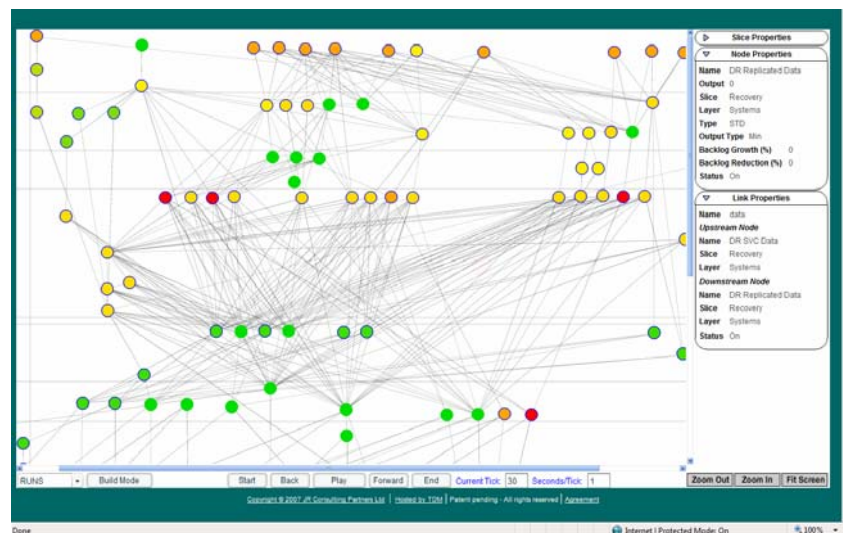


Figure 1: example RES Map showing nodes and dependencies

A library of scenarios relevant for the business and its location were added to the model, simulating denial of services or destruction of assets in patterns that reflected major disruptive events. Running the model with one or more active scenarios transmitted the effects of service depletion along dependencies, ultimately affecting stakeholders and attracting impact. It was clearly demonstrated in this way that different scenarios attracted different impact patterns.

Various strategies were proposed and these were each reflected in the model. RES allowed them to be fully or partially implemented or withheld in any combination, and with varying lead times (often a factor affecting potential cost). We evaluated five detailed strategies in this way, taking account of their cost, complexity and RES impact profile for each of the representative worst case scenarios. These included:

- Contracted hot-site IT DR with work area recovery for 30% staff in 24 hours

- Hybrid replication using DR for sub-critical IT and 30% work area recovery
- Replica systems and buildings (do everything)
- Do nothing

Based on these, our cumulative (abridged) impacts for 10-day RES simulations following Destructive Site Loss were as follows:

- | | |
|----------------------|----------|
| • Do Nothing | £968,705 |
| • Conventional DR | £229,224 |
| • Hybrid Replication | £82,608 |

An important caveat on all numbers like these arising from simulations is that they are inevitably less accurate than the raw data used to create them. In this case, dependency and impact profiles were all based on interviews with staff and this soft data then input into the model. Notwithstanding this, the algorithms used by RES have been designed to converge on hard organisational characteristics, such as loss capacity for each impact type, rather than by upward calculation of losses.

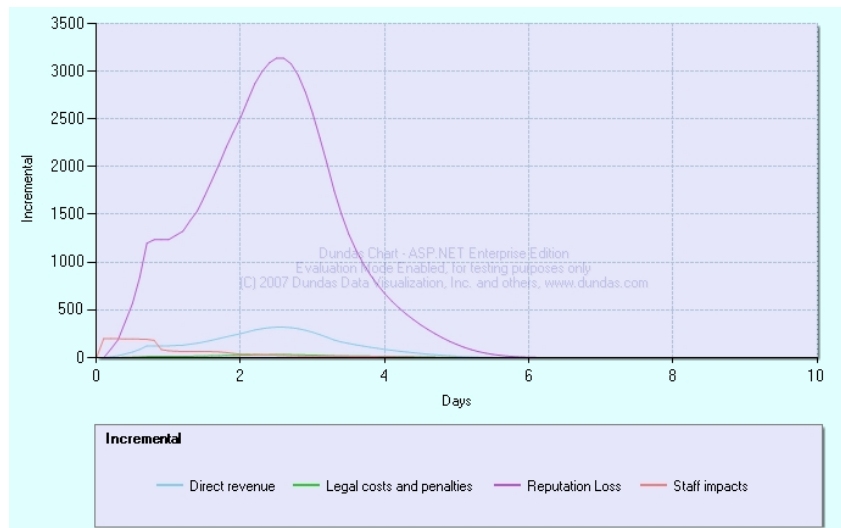


Figure 2 : Incremental Impact Profile for Hybrid Replication solution

This outcome illustrates the reduction in impact and exposure to risk that can be achieved by adopting even a basic disaster recovery solution. In this case replication reduced this still further, cutting the impact felt over the 10 days immediately following a major incident by more than 90%. In this case, the costs associated with each of the latter two options were found to be broadly similar and the hybrid DR solution was recommended by INONI as the preferred solution.

Our findings on behalf of the client included:

- Hybrid replication offered the most cost-effective solution in their situation

- RES gave financial and qualitative impact profiles for each scenario and strategy providing clear comparability between various strategy alternatives
- It allowed repeatable demonstration and supported the business case
- It provided quantified RTOs for all processes, applications, data (RPOs) and other entities, validating or informing Business Continuity Plans
- It allowed many scenario variants to be explored, validating the strategy
- RES remains in place and accessible. It can be used to simulate the effects of real events as they happen by creating an applicable scenario.

Overall, the programme was considered highly successful, with other important generic outcomes. These included:

- Editing the model and re-running the risk portfolio was straightforward
- The graphical online map was clear and easy to follow
- RES allows most organisational and stakeholder behaviours to be simulated and can cope with complexity (150 nodes and 400 links in this case)
- The entire activity took less than 2 months

To find out more about how INONI RES could be used in your organisation, please contact us now by emailing info@inoni.co.uk or call +44 (0) 845 045 1171.