

Demonstrated Leadership
in Document Management
and Production



How A Premier Insurance Institution
Improved Service Quality
while Lowering Total Costs of Operations



A ***Solutions Paper*** profiling Electronic Forms Management and On Demand Print solutions developed by Tremware Corporation.

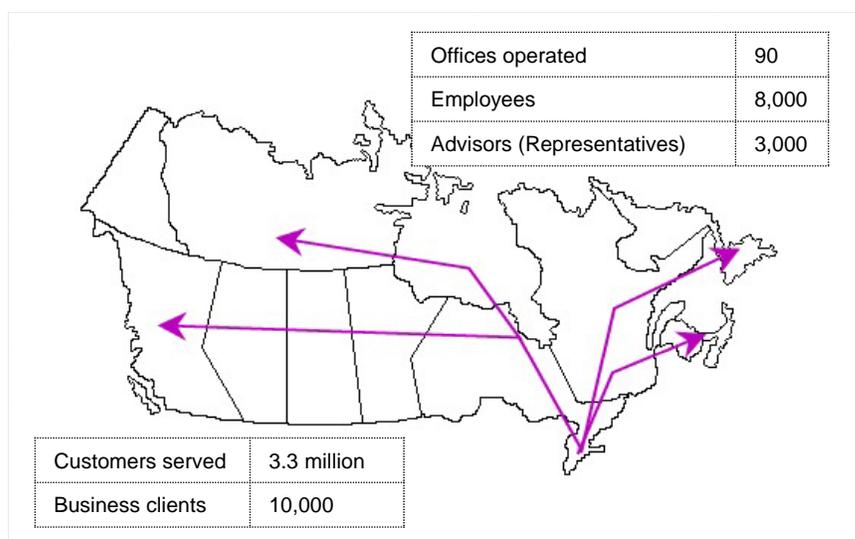
Clarica Life Insurance Company , Waterloo, Ontario

Clarica was a world class, individual life and health-focused insurance leader, well before the merger with Sun Life

Clarica is the continuation of Mutual Life of Canada which has operated since 1870.

With 90 offices spanning the country and more than 3,000 Clarica agents and brokers representing their products, Clarica serves more than 3.3 million Canadians.

In May 2002, Sun Life and Clarica merged. The Clarica brand was sufficiently strong that it continues to operate as a subsidiary of Sun Life Financial Services Canada Inc. (SLF). At December 31, 2002, SLF had total assets of Cdn \$360.5 billion under management.



Document Services Evolution at Clarica

Approximately 1993 Clarica management re-organized internally to capture greater economies of scale with the approach of “shared centralized services”. One of the newly empowered services emerging from this re-organization was a distinct unit focused exclusively on **document services**. Dave Evans, a long-term manager with Clarica with a background in graphics arts production, who had served on the original task force responsible for the specification and implementation of the centralized functions, became the new Director of this unit and continues as such today. Dave holds the designation of Electronic Document Professional for which certification is managed by Xplor International, the worldwide International electronic document system association. This association represents over 2500 member organizations from 44 countries and the electronic document services industry valued at US\$125 billion.

Document Services – Situational Background and Issues Requiring Attention

Meeting the challenge of better forms inventory management was the initial objective – other initiatives cascaded from there.

Dave Evans

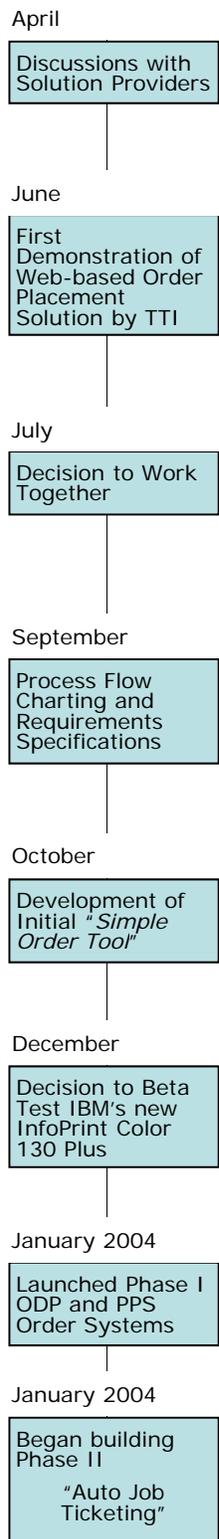
In step with the requirements of the new millennium Clarica had selected and implemented JDS as its core electronic information platform. Concurrent with this deployment Clarica was also deeply committed to the use of Activity-Based Costing as a means of establishing improved understanding of what particular activities actually cost and where there were opportunities for improvement.

In early 2003 the Document Services Department (DSD) was confronted with the following realities:

- *Forms Inventory Management* – with 90 offices and a proliferation of standard regulated and un-regulated forms inventory in each office, there were significant opportunities to shift more towards a “just-in-time” inventory order and supply system and eliminate the significant carrying and obsolescence costs associated with this practice.
- *Production equipment surplus capacity but human resource bottlenecks* – with significant investments in sophisticated print, bindery and mailing facilities in Waterloo and Montreal, the DSD equipment was under-utilized but the inefficient interfaces with the steadily expanding internal customer base across the country was stretching the department’s people resources, particularly in the design, development and production handling of custom marketing materials.
- *Staffing Constraints* – with full-time equivalents of 47 in Waterloo and an additional 23 in Montreal there were pressures to hold steady the investment in people and reduce them if possible.
- *Intranet emergence* – Clarica’s intranet capabilities were just emerging and the user-friendly style of the browser interface was readily accepted by all forms of customers. DSD saw this capability as a natural opportunity for their customers could more efficiently interface with their services.
- *Advances in Colour Printing* – IBM and other suppliers were delivering new capabilities to produce full colour high speed outputs and had evolved sophisticated interfaces that supported web-enabled access to customer-centric data.
- *Cost Accountability Focus* – with the adoption of Activity Based Costing principles there was a need to establish automated solutions for costing specific orders and having those charges applied to individual profit and cost centres across the operations.

Sourcing a Solution

Solution Timeline



With the preceding context, Evans and his senior staff went looking for solutions. Off the shelf remedies were not readily available so a custom solution appeared to be the direction required. Through his contacts at **Xplor International** ultimately Evans was counseled and guided to work with a firm located in London, Ontario, Canada which today operates as Tremware Corporation.

Tremware Corp. is a leading provider of web-based process document automation software and professional network services. From powering print-on-demand, to PDF data capture and presentment, to supporting sophisticated networks, as well as hardware procurement, Tremware's leading edge web-enabled technologies deliver significant value.

Solutions Development

Two distinct yet related customer order interface capabilities were developed. The On Demand Print (ODP) and the Personalized Print System (PPS).

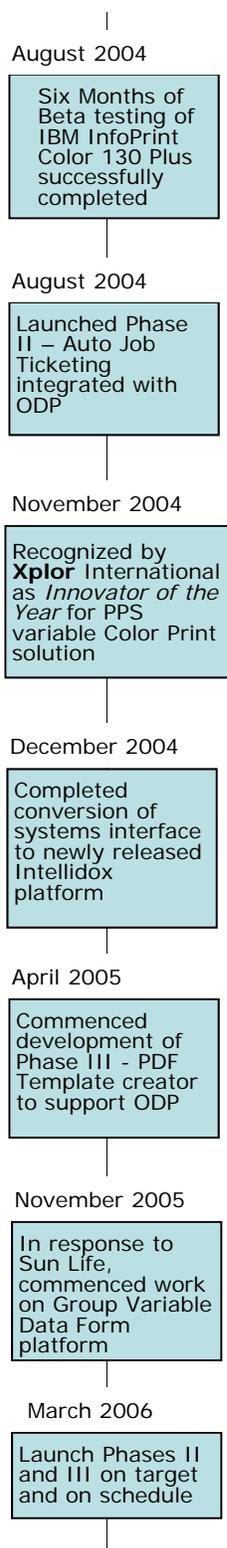
The focus of ODP is the very large centralized library of standard forms both industry regulated and proprietary to Clarica which today totals approximately 1,200. PPS allows customers (both employees and advisors) to use menu-driven choices to design customized marketing materials (stationary, business cards, agency announcements and presentation handouts, notebooks and others).

Users when initially logging into the service are guided to develop a personal profile which is stored permanently for efficient repeat use on future orders.

Other features include choice of languages, order costing, order tracking and a 48 hour order delivery window.



Solution Timeline (continued)



Technical Solution

Tremware built the Clarica/Sun Life ODP and PPS solutions using a number of components. Some were proprietary components of Tremware such as the Intellidox E-Forms platform and others were third party component-ware. All components were configured using either Visual Studio 6.0 or Visual Studio .NET for more recent additions.

All Tremware applications are designed in three layers: (a) Interface Layer, (b) Logic Layer and (c) Database Layer.

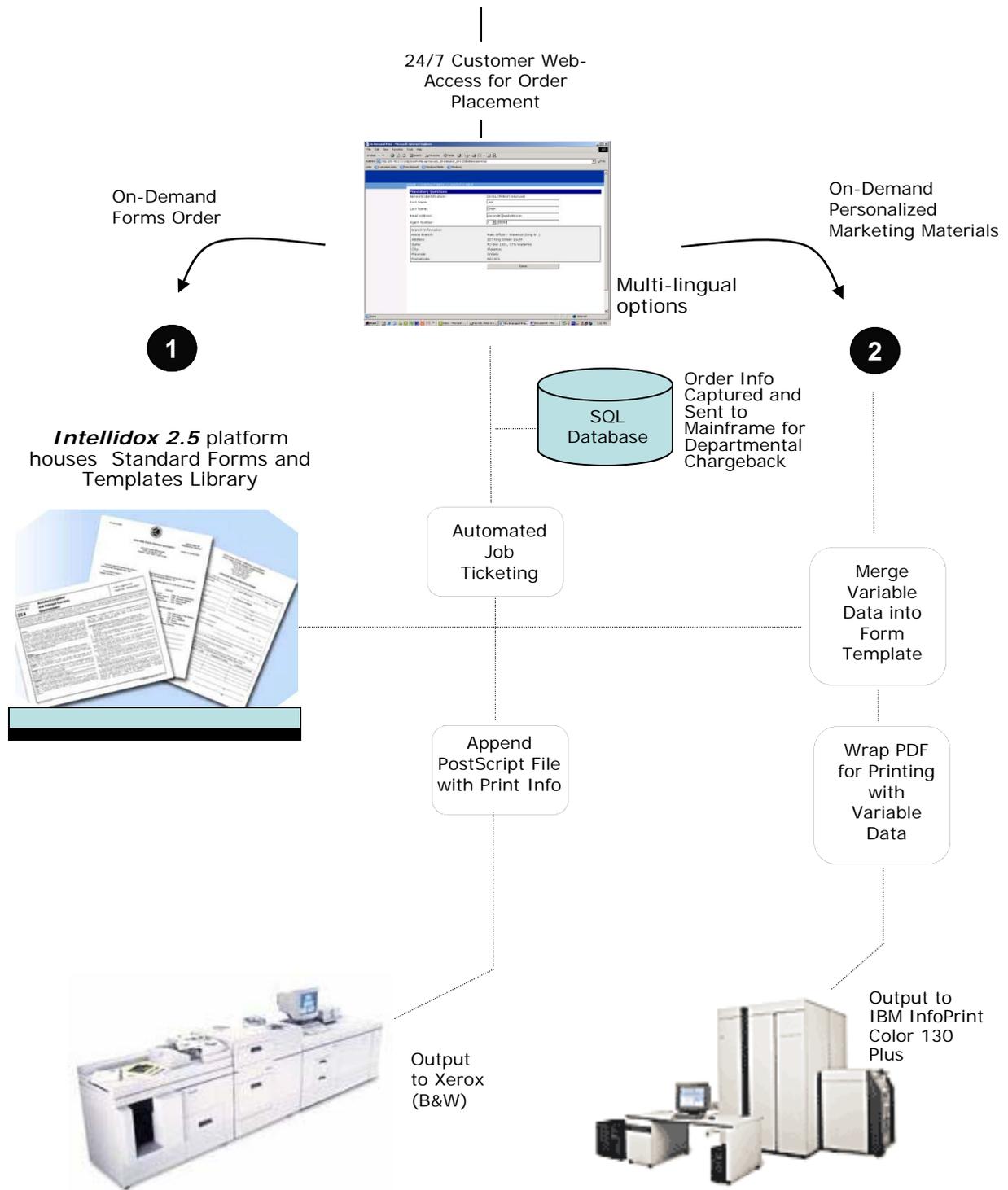
The **Interface Layer** was built using basic ASP pages, however additional functionality was added in the Logic layer to allow the Clarica system administrators to construct variable ASP pages as required. (i.e. if the customer wanted to add a specific ordering question about a certain document, they could add the question and then assign it to the document, result: When users order this document they are presented in the interface layer with the menu option in the form of a question).

The **Logic Layer** uses a number of Tremware and third party components. Tremware's Post-Script Header Tool is used in this area to take specific order requirements from users and then append these print requirements to the header of a post script file. The result is that a post-script file arrives at the printer with all the job ticket information already configured. Another Tremware component in use here is the I-Director.DLL. This component allows the customer to variably add data to form fields on a PDF template. The administrators can publish the PDF template, then tie the form fields to a data element resulting in a user being able to construct a variable marketing document "on-the-fly". A third party component (ActivePDF toolkit) is used to wrap the PDF into a fully contained PDF for printing purposes. Active PDF essentially takes the PDF Template and the data and combines it into a closed PDF. Another Tremware component is the Translator component which enables Multilanguage interface layers (all translation provided by the administrator so you can add/modify all your interface "tags" as needed). Finally a third party component (PDF to Post Script) is used to transform any Active PDF generated PDF's to a Post Script file that in turn allows the Post-Script Header Tool to manipulate the header information.

For the **Database Layer** both Tremware and Clarica/Sun Life decided to standardize on Microsoft SQL 2000 as the database. All document and user attributes are stored in the database along with all order information required for departmental charge back.

Crystal Reports is used as the standard report generator at Clarica/Sun Life. Tremware configured a number of standard forms that provide valuable and timely information for charge-backs, taxing, etc..

E-Form and ODP Solution Framework





The Electronic Document
Systems Association®

Awards Clarica with
Innovator of the Year

November 2001

Canada's Monthly Graphic
Arts News Journal

PRINTACTION
Online



July 2002

Clarica's Dave Evans
recognized as one of
Canada's top 50 most
influential people in the
Graphic Arts Industry for
ODP marketing
materials development
initiatives

Investment Outcomes – Major Benefits Captured

The combination of the centralized ODP capabilities, the electronic forms platforms and the optimization of the IBM high speed color printing investment have yielded extensive rewards for Clarica and Sun Life. In addition the investment made in intellectual capital (ie the web-based technological expertise acquired by the DSD staff throughout this process) will extend these rewards far into the future.

Hard Cost Savings/ROI

With justifiable pressure on executives to substantiate investments in new technologies, the annualized hard cost savings from these collective initiatives have produced stellar results. ODP savings alone relative to standard form costs are estimated to be \$250k to \$400k per year. Why?

Well documented industry studies confirm that typically 30% of forms held over long timeframes ultimately end up as waste due to obsolescence. Forms often become obsolete due to regulatory changes as well as internally driven changes to prescribed data fields represented in each form. With the ODP capabilities offering 48 hour turnaround for 90+ office locations and potentially 14,000 users, key decision-makers in each location feel secure in reducing sharply their forms inventory investments which translates into most of the hard cost savings referenced above. The range of estimated annual savings relates to the variability represented by the rate of federal and provincial regulatory changes as well as company-induced modifications.

Long-term Business Space Utility Savings

With forms inventory storage requirements sharply reduced in all office locations, in the long-term higher value-added use (or less office space will be required) can be realized from the numerous square feet of space previously dedicated to storing forms and stationary supplies.

Improved Version Control

Centralized web-enabled control with the Intellidox platform by DSD over form versions guarantees that all changes are made once and all users are accessing the most pertinent and accurate forms data continuously.

Less Business-Wide Re-Work

With rapid up-date to version control and minimum stocking quantities required at all user locations, overall abilities of the front-line users to create quality data without re-work relative to utilizing out-dated forms is also improved. Less repeat data entry means less errors, better quality and data integrity across the entire business system.

Investment Outcomes – Major Benefits Captured (continued)

Top Quality Marketing Materials at Nominal Costs

The acquisition of the IBM InfoPrint Color 130 Plus investment meant a dramatic shift in capability to produce high quality materials on virtually a “just-in-time” basis for Clarica’s (and now Sun Life as well) widely dispersed salesforce. Relative to outside costs of production, the value proposition is no contest in terms of quality, speed and bottom-line per impression cost to the total business network.

The customized web enabled order system fully integrated with Advisor variable data was essential to harnessing the full potential of this major investment.

Maximizing Economies of Scale

The May 2002 merger with Sun Life meant over-nite expansion in the internal customer base for the Clarica DS unit. Extending ODP web capabilities to handle Sun Life’s unique requirements is already well under way (technologically a relatively straightforward extension of the base platforms already in place). Doing so will drive down unit costs across the combined business even further.

Intellectual Capital – Staff Competencies

Web-based solutions are entering a new era where front-line, non-IT staff are participating in the design and maintenance of applications in new and creative ways. ODP with TTI’s hands-on customer approach set new standards for user involvement and influence in the customization of the system’s performance capabilities. Rich and abundant user control over the application as it was designed produced deep learning and knowledge transfer which shifted permanently the competencies of the DS staff members, empowering them to contribute continuously to future enhancements and extensions of web technologies in general.

A Sound Underlying Document Management Platform

The concurrent and continuous rapid evolution of TTI’s Intellidox series of platforms have now been established for .NET compatible environments which means superior long-term positioning to leverage fully the emerging capabilities of XML-based WEB SERVICES. As suppliers and corporate customers also evolve their technologies, Clarica-Sun Life is well positioned for Web Services interoperability opportunities which have just recently been made possible by these leading edge technologies – in short the robust, contemporary nature of the Microsoft development environment means the availability of a long-term, enduring and secure technology investment.

We found the Tremware experience to be effective and professional. Their deep rooted knowledge in both networking and document automation areas was obvious.

Dave Evans

Director of Document Services

We enjoy a very positive working relationship with Clarica-Sun Life. Creating this magnitude of impact for large organizations like Clarica-Sun Life represents the best use of our software platforms and integration skills.

Bill Tremeer

Vice-President

Tremware

About Tremware Technologies Inc. (TTI)

TTI is a leading provider of web-based process document automation software and professional network services. TTI's depth and breadth of experience, reliability and leading edge, innovative technologies are key reasons why organizations partner with TTI. From powering print-on-demand solutions, to PDF data capture and presentment, to outsourced network services solutions and cost effective hardware provisioning, TTI delivers superior returns on corporate IT investments and operating budgets.

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