
WHITE PAPER

Opus®

***Elixir builds
end-to-end
solutions that
manage the
documents that
express your
business.***



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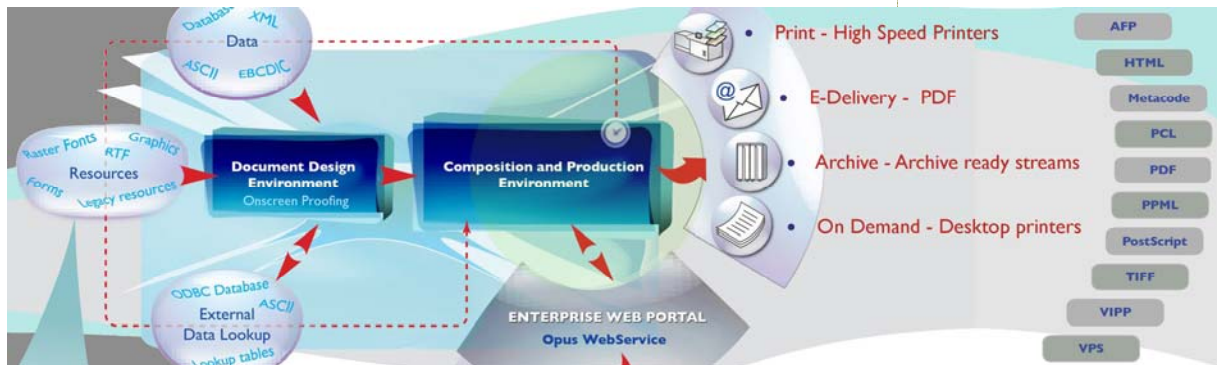
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Introduction

Opus is a complete design and production environment for print and web document publishing, incorporating rapid application development tools for high volume, personalized document publishing in a Microsoft® Windows® environment.

Every element of the document can be formatted or determined at the time of production based on user-defined business rules combined with available customer or other data. The result is printing color, images, fonts and drawing elements based on what would be most effective for each customer.

Effective document personalization means your message to the customer is clear and not lost in a mix of offers that don't apply. Simple and effective examples of document customization, using insurance as an example, include promoting student discounts to families who have children of driving age and just as important *not promoting* student discounts to families who don't need it.



Likewise the production and distribution of the document can be customized based on the recipient's needs. Opus can be set to distribute document via print, email or both based on the business rules for each customer or recipient.

The product primarily consists of two major applications, the Opus Document Designer and the Opus Production System.

The Opus Document Designer is a Microsoft Windows design environment where documents can be composed and previewed on-screen with 100% print fidelity. The Designer supports a diverse variety of printer resources including Xerox® and AFP fonts, images and forms as well as supporting documents created in other Microsoft Windows applications including Microsoft Word.

Utilizing files and resources from across the organization allows the document design group to leverage all documents created in the company.

The Opus Production System affects composition by combining documents with targeted information. This combination results in dynamic document generation based on customer specific profiles stored in databases. The production system's multiple output capabilities join to provide a great deal of flexibility. Opus applications are designed once and used for any type of printers and web-based distribution methods including AFPDS, email, HTML, PostScript®, PPML, PCL, PDF, VPS, Xerox Metacode, support for Xerox LCDS-Spectrum which provide color Metacode and support for Xerox VIPP.

Industries Using Opus

Its' ability to generate personalized documents of all kinds allows Opus to serve a wide range of industries. Elixir has found particular success in education, finance, government, healthcare, insurance, manufacturing, service bureaus, telecom and utilities.

Below are some examples of the industries that Elixir serves and the types of applications they're developing with Opus:

Banking and Insurance

Statements of all types including checking, savings and consolidated statements as well as benefit booklets, letters, performance reports, policies and portfolio reports.

Financial Services

Statements of all types including 401K, investment, and consolidated statements as well as performance reports, confirms, 1099s, tax reports and total compensation booklets.

Healthcare

Benefit booklets, ID cards, explanation of benefits (EOB) and claim letters.

Retail

Catalogs, collateral fulfillment, renewal notices, promotions, direct mail, brochures, coupons, correspondence, documents via web fulfillment

Service Bureaus

Booklets, catalogues, coupons, statements and other transactional documents, mailers, newsletters.

Elixir serves 10,000+ customers in 70 countries across a wide range of industries.

Key Benefits

Provide 100% Personalization for Each Customer

Use the data and information available throughout your organization to format documents that speak to each customer.

Design Once, Publish Anywhere

Avoid redesign when moving documents to the web. One Opus design supports all the Opus output streams including print and web.

Utilize Non-Programmers for Development

Reduce or even eliminate your reliance on your costly and busy development staff. Building even the complex conditional logic into Opus designs is done in a graphical interface without coding.

Integration with other Systems

Opus integrates with other systems including Customer Relationship Management (CRM) and Archive applications interacting with other business modules at run time through standard API interfaces. Opus integrates into additional workflow processes through ASP or Java programming.

Imports a Wide Range of Document Formats and Printer Resources

Opus can import Xerox and AFP resources including forms, fonts and graphics and allows customers to work with both resource types easily leveraging all available printers and all resource types. Support for documents created in other products such as Microsoft and Adobe® applications.

Automated Processing Increases Window of Operation

Opus includes a production management feature automate print production so jobs can run unattended thus providing a 24/7 production environment. Opus keeps the production administrators informed as to progress through automatic notification via email.

Key Benefits

Web-Based Production Administration

Opus offers a centralized administration interface to manage the production process from any remote location. The log monitoring mechanism executes user-defined actions provides notifications on system status to the administrator. Administrators leverage Microsoft Windows users and groups to define permissions and roles for each Opus and Opus WebService user. Administrators also configure the various formatting engines and production output queues using the same administration console. Opus also allows real time production administration to monitor the production process from remote location for setting, editing the configuration.

Fully scalable

Opus is scalable to the desired production throughout on single/multiple machines on a LAN and fully utilizes today's high speed multiprocessors and hyper-threaded machines.

Asian Language Support

In addition to English, Opus offers language support for document composition in Japanese, Korean and Chinese using Unicode TTF and raster double-byte fonts. Global companies requiring documents in multiple languages can use a simple data flag that directs Opus to print a document in the desired language. Vietnamese, Thai, Hebrew, Arabic, Greek and Turkish languages are also supported.

Important Product Features

Opus provides a powerful set of tools for designing, printing and presenting one-to-one business documents such as marketing letters, statements, bills, benefit booklets and ID Cards. This section highlights some valuable Opus features.

Design and Layout

Advanced Layout tools

Opus document designer provides a user friendly WYSWYG tool that enables rapid document development. It provides a wide variety of layout functions including:

- Graphics import
- RTF import
- CMYK and RGB color support
- EPS file support
- Barcodes and OMR marks
- Color support (full, accent, highlight)
- Drawing fields
- Static and dynamic tables
- Text formatting controls
- Mathematical computations
- Overflow data control across pages
- Support for lookup tables
- Doublebyte and Unicode font support

Integrated Form Design and Data layout

Tools for drawing, aligning columnar data, specifying line spacing and typographic controls, word wrapping, justifying paragraphs, importing graphics and signatures, inserting borders and adding highlight, full and accent color.

Dynamic Table of Contents Builder

Opus can generate a completely dynamic table of contents based upon selected data in each document.

Important Product Features

Data and Database Connectivity

Data-Driven Charts and Graphics

Support for a wide variety of highly dynamic data driven business graphics including bar graphs, pie charts, line graphs, radar charts and others in 2D or 3D.

Database or Flatfile Input

Opus can accept the data input in form of an ASCII flat file or through a database.

Data Definer

Designer can store thee definitions in a data dictionary and specify exactly how variable data is interpreted when building a document.

Important Product Features

Proofing and Printing

On-Screen Proofing and Printing

Test and proof live data applications on the screen, with complete fidelity, before printing them on the production printer. The Opus viewer provides an instant view of the print output during the document design process and allows for proof printing on local or production printers.

Document Formatter

At print time the Opus Document Formatter produces a fully composed datastream for any major printer or presentation format.

Wide Range of Output Options

AFP, HTML, PCL, PostScript, PDF, VPS, PPML, Xerox Metacode, Xerox VIPP and supports the Xerox LCDS-Spectrum. Opus also delivers documents via email.

N-up and Page Imposition

Support for placing pages at pre-defined locations on media papers. Both simplex and duplex N-up definitions are supported. Opus also supports page imposition for booklets to ensure each page prints on the appropriate facing page for booklet creation.

Selective Reprint

Opus supports selective reprints of whole or part of the output which may be sent to a local printer.

Post-processing and house-holding

Opus provides functions for output management and finishing such as sorting, splitting, OMR marks creation etc. Formatted documents can be sorted and spitted based on a variety of parameters such as number of pages, output queue, ZIP code and other sorting parameters. Opus allows integrates to a variety of mail sorting packages.

Important Product Features

Volume Parallel Processing (VPP) and Job Automation

The VPP feature of Opus classic provides customers with the option to split the input data into multiple segments and process the segments through one or multiple formatters. This allows multiple formatters to process large input data files simultaneously. The processed segments can either be recombined into one output data file before sending to the destination or can be fed individually to the printers as they are processed. In addition the output can be sorted according to any criteria. This function enables fast processing of large data file while reducing the printer down-time.

Important Product Features

Management and Administration

Track Document Designs and Changes

Opus can record and track design structures internally for internal management audit systems application changes.

Automated Processing

Opus can operate in a “lights out” environment processing jobs through an unattended system. Job automation is provided through an Opus “watch” utility. Multiple folders can be monitored through this utility and various actions can be taken when an input file is detected.

Opus as Windows Service

Opus can also be initiated as a service. When this service is running and machine is rebooted, all production components start without requiring any user log-in. All lights out production (formatting, conversion and delivery) operate.

Opus operates in 2 prominent modes i.e. Development and Production. In development environment, below minimum hardware configurations can work. In the case of Production environment a higher configuration machine is recommended. Below are minimal and recommended hardware and software requirements need to be met to run Opus environment optimally.

System Requirements

Minimum hardware/software requirements for Opus Server are:

Pentium IV 2.0+ GHz

512 MB RAM

60 GB HDD

Windows NT, 2000, XP with latest service pack

The recommended machine configuration is:

Dual Pentium IV 3.0+ GHz Hyper Threaded processors

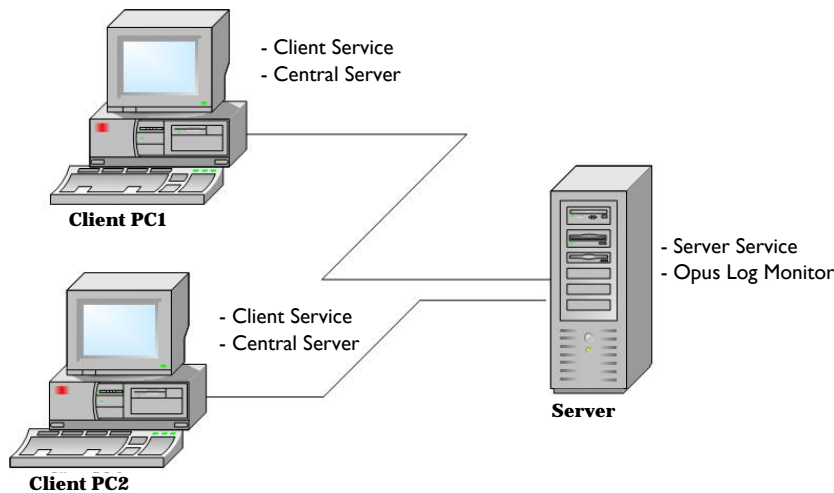
1 GB RAM per CPU

120 GB HDD

Windows XP Professional with latest service pack

The Technical Landscape

The Opus client server application is fully scalable providing customers with complete flexibility to run different production components on one or multiple machines. Formatting can be done on one system while conversions are processed on another machine over the network. An Opus Administrator can also run Opus on a server machine while submitting jobs and monitoring through a remote desktop machine with access to all the system's functionality. This setup would work in exactly the same manner as an administrator operating via a server.



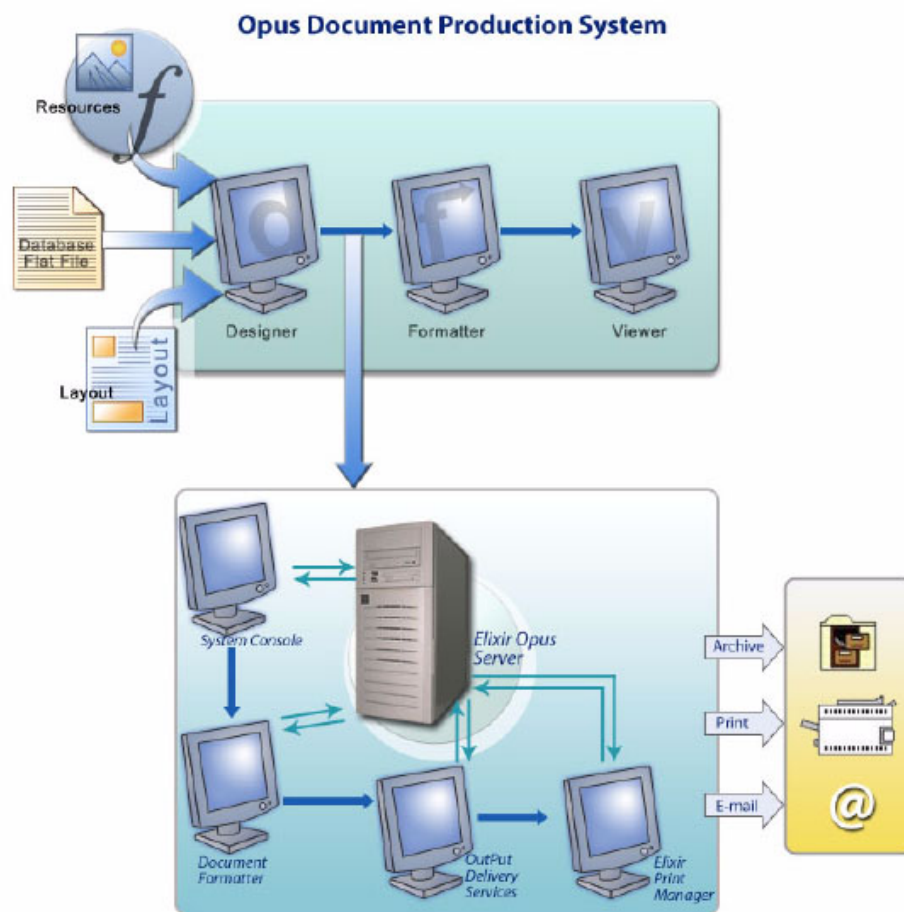
Typical Opus Workflow

There are typically three Opus workflow points in an organization; development, testing and production.

A standard workflow starts with the document design creation on an Opus development workstation with a user license for the Opus development pack. This allows the design creation as well as pre-view and proof printing on desktop printers. Opus test servers are the next point in the workflow where the design is tested with variety of data instances onto the target printer for application validation. Once the application has been tested it can be deployed on the Opus production servers. Elixir highly recommends an Opus

The Technical Landscape

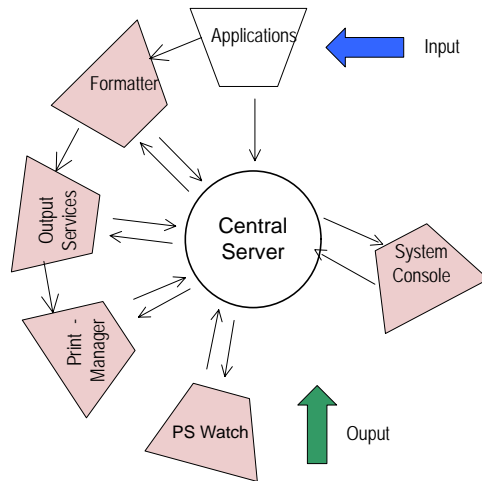
Document and printer resources such as fonts, forms and images can either be stored separately for both environments or they can reside on a common file server. However, it will be useful to keep the resources separate to make sure that no production resource is being over-written by a test/development resource accidentally. All the designer workstations can “point” to the common resources repository with an Opus administrator holding responsibility to move the resources to the production environment after they have been tested and approved.



Applications can communicate with Opus in a real-time mode placing data in the Opus input databases and sending messages to the Opus Central Server to indicate where the data resides. The Opus Central Server is notified that a document index has been created for processing.

The Technical Landscape

The below diagram depicts a typical document path and use of the Opus Central Server from data input to printing.



The Opus Central Server sends a “request to format message” to the Opus Document Formatter containing the location of the document in the Opus database. When the formatter is done, it sends a message back to the Opus Central Server signaling that the process is complete.

Next the Opus Central Server sends a “request to build print data stream” message to Opus Output Services containing the location of the document in the Opus database.

Output Services reads the queue database to determine which output stream to build and converts the formatted document to its final printer datastream format and places an entry in the spool database. Output Services sends a message back to the Central Server signaling that the conversion process is complete.

The Opus Central Server sends a “request to deliver” message to the print manager containing the location of the document in the spool database. The print manager determines from the Opus database what device is associated with the document’s output queue, and attempts to deliver the datastream to that device. Once the print data stream is delivered the spool database is updated.

The system console is also used for performing other operations including job creation, scheduling, queue creation, and to connect to printer devices. The system console communicates with output services, print manager and the document formatter components passing the required information.

Real Life Examples

Industry: US insurance company streamlines policy production and maintenance

Result: Elixir delivers efficient policy generation

Situation:

The system used by this US-based insurance company to produce customer policies proved to be time consuming, expensive, labor intensive and susceptible to human error. Periodic changes in the forms were difficult to implement.

Goal:

To generate new policies faster, reduce costs, eliminate errors, and permit changes in policies without requiring IS personnel. Documents to be printed on an IBM® Infoprint 60.

Synopsis:

Using Elixir's Opus to generate insurance policies, the company requires only a few hours from the time the policy is booked to when it is ready to be sent to the customer. In addition to faster product delivery, errors have been virtually eliminated. Changes in forms are easily implemented with Opus state-of-the art features.

Benefits:

- ***Policy creation time reduced from days to hours***
- ***Errors nearly eliminated***
- ***Policy revisions and new documents delivered quickly***



Real Life Examples

Industry: Online global education company
Result: Elixir creates custom documents for the school

Situation:

This online educational company realized what a monumental task reworking its document applications in a mainframe environment would be. They needed a better system, but wanted to preserve their investment in their existing Xerox forms.

Goal:

The company wanted to continue business- as-usual while converting existing applications to run in an AS/400 environment. They wanted flexibility in changing applications and in creating new ones. They also wanted the option to output to any printer.

Synopsis:

The Opus solution allowed the company to convert all of their document applications to an AS/400 environment within three months. Opus provides the flexibility they need to move into the future and yet retain their investment in existing hardware and software.

Benefits:

- *Company **converts all documents** to from mainframe to AS/400 **in three months** without interruption to existing production environment*
- ***Investment** in existing Xerox forms **maintained** because of Elixir's ability to convert between formats*
- *Company can now **print to all** existing **printers** and has many options as they purchase additional printers*



Real Life Examples

Industry: Financial company
Result: Going public creates rapid growth in customer communications, Elixir handles the increase and positions the company for more expansion

Situation:

When a major financial company went public, business grew tremendously. The need to handle the increase in billings, statement production, and correspondence became a critical issue. COBOL programming of document applications was too cumbersome, time-consuming, and expensive.

Goal:

The company needed a solution that made it easy to develop and print one-to-one documents. The system needed to be extremely scalable to handle projected growth.

Synopsis:

The volume of letters created and processed has increased threefold in the past year alone. The company was able to move from hundreds of letters to Opus designs using multiple conditions in complex logic to consolidate the versions. This reduces the overall costs for maintenance and represents a huge savings in processing time.



Benefits:

- **Letter production increases three-fold** in one year and the Opus production solution is keeping step with increased volumes
- **COBOL programming not required** any longer, all documents are created and edited in the Opus graphical interface without coding
- **Consolidation of many documents** into single versions by applying business rules in Opus to determine which forms can be brought together

Real Life Examples

Industry: Business and technology solutions provider

Result: Elixir eases the production of benefit booklet enrollment

Situation:

Because of the complexity and the constant change in their healthcare enrollment booklets, this company was struggling to keep up with the revision and production process. Millions of lines of code were required to generate output for their Xerox 4135 printers.

Goal:

The company needed a solution that would simplify and accelerate the process of creating and maintaining flexible healthcare enrollment booklets for their customer. They needed to reengineer the way booklets were produced so as to make the process easier, quicker and more cost effective.

Synopsis:

Elixir's solution, Opus, cut application development time in half and document customization has improved dramatically. The company has accelerated the entire process of building, changing and enhancing applications saving both time and money.

Benefits:

- **Development time** for the booklets is **cut 50%**
- **Booklets previously represented by millions of lines of code now managed and edited in the Opus graphical design interface**



Real Life Examples

Industry: Large print service bureau headquartered in Australia

Result: Increased print volume by 20% with Elixir Opus

Situation:

This print service bureau was hampered by the massive amount of programming required to produce attractive variable data financial statements.

Goal:

Elixir's powerful document composition solution, Opus, drastically reduced development time in a visual environment.

Synopsis:

Now the company works faster and more efficiently, and can produce better-looking documents. They have time to take on additional work and realize increased profit because of it. Overall volume is up 15-20%.

Benefits:

- *Moving to a graphical development environment from a programming-centric method has **drastically reduced** development costs*
- ***Decrease in** printing turnaround **time** has allowed the company to take on more projects and **increased profitability***



Real Life Examples

Industry: Financial company

Result: Increased production resulting from global expansion forces the bank to improve their document production processes

Situation:

Political changes opened the door to economic globalization. To handle the resulting rapid growth, this large bank required new infrastructure to handle high volumes of customer communications.

Goal:

To implement a scalable printing solution that could not only design documents quickly, but also operate in tandem with their Oracle database and various high speed printers.

Synopsis:

The financial institution has successfully handled the tremendous growth brought about by economic globalization. Opus document system is an essential part of the new infrastructure that allows them to keep pace with the rapidly increasing volume of customer communications.

Benefits

- *Opus allows the company to **utilize all their high volume printers***
- ***Reduced design time** improves turnaround and allows company to bring **new products** and services **online faster***



Real Life Examples

Industry: Service Bureau in Philippines
Result: Elixir solution helps print bureau prosper

Situation:

A large provider of enterprise document production services in the Philippines was using a mainframe system to produce a wide variety of documents such as billing statements, letters, notices, reports and direct mailers. Finding the right mainframe resources (Pagedef, Formdef, Fonts, etc.) was difficult and time-consuming. Creating customized resources was even less cost-effective.

Goal:

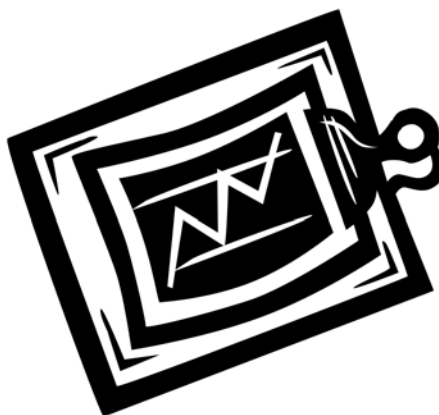
The service bureau was interested in moving their document production off the mainframe. They needed an easy-to-use versatile solution that can design and update all of their applications.

Synopsis:

Using Opus, the service bureau can now do more jobs in less time. Client satisfaction has increased with faster service. Eliminating the use of the mainframe has reduced operations costs. Efficiency in operations and document application development was increased due to Opus' easy-to-use features that simplified many tasks. The results from Opus exceeded the customer's expectations.

Benefits

- ***Elimination of mainframe has significantly reduced operations costs***
- ***Faster turnaround has allowed the company to take on more projects and increase profits***
- ***Service bureau can now fulfill customer projects in less time which is creating return and new business from the existing customer base***



Real Life Examples

Industry: Large US insurance provider
Result: Elixir delivers efficient workflow solution

Situation:

This insurance provider had a cumbersome, complex, time-consuming, and error-prone method for producing its benefits booklets. ID Cards were being produced in another system and mailed separately, resulting in high mailing costs.

Goal:

To reduce the cost and time required for generating a benefit booklet and ID card for new customers. This required a complete workflow for the efficient management and production of customized benefit booklets. The production of ID cards needed to be integrated into this process.

Synopsis:

With Elixir the company now has a custom workflow solution that dramatically accelerated the production process. The time from enrollment to delivery was reduced from 10 weeks to one day. Lower costs, elimination of errors, and the consolidation of products in one mailing were also achieved.

Benefits

- *Time from enrollment to booklet delivery **reduced from 10 weeks to 1 day***
- ***Reduced mailing costs** by consolidating all related documents into one package*
- *Customer **questions reduced** because all information is delivered together*



Elixir