Enterprise Application Development
Who We Are

ScienceSoft is a provider of custom enterprise applications and IT consulting services with HQ in McKinney, TX

- **30 years** in IT business
- **550+** employees, **55+** .NET experts
- **1,850** completed projects, **100+** .NET projects
75% of our revenue comes from 1+ year-long customers
Developers with the average experience of **7-8 years** on complex software projects

- We deeply understand how to work in internationally distributed teams
- We quickly learn the ins and outs of the project
- We go beyond standard development frameworks and can develop custom ones
- We speak the same business language as the Customer

SCIENCESOFT’S DEVELOPMENT TEAM
Full-cycle Services

1. Business analysis
2. UI design
3. Architecture design
4. Application development
5. Maintenance
During **requirements engineering**, we focus on the following activities:

- **Elicitation**: We capture all project requirements: high-level and detailed, functional and non-functional.
- **Analysis**: We prioritize and model requirements (use-case diagrams, business-process models, data flows, etc.).
- **Verification**: We ensure that system requirements are complete, correct, consistent and clear.
- **Specification**: We document the final scope of requirements that meet business, project, and strategic goals.
Our approach to UI design rests on 3 pillars:

1. **Gather, analyze and interpret user information to comply with business needs and user expectations.**
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2. **Plan every user interaction with the software to make it convenient and easy to follow.**
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3. **Design with brand consistency in mind and bring fresh ideas of visually unique solutions.**
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When developing software architecture, we use a modular approach that considers a complex application as a composition of independently developed components. This ensures:

- Higher reliability
- Shorter delivery time
- Better maintainability
- Better expandability
Traditional Architecture Design

- **Users**
- **Presentation Layer**
  - UI components
  - Presentation logic components
  - Access control
- **Business Layer**
  - Business workflows
  - Business components
  - Business entities
  - Access control
- **Persistence Layer**
- **Data Sources**

**Multiple External Systems**

**Communication**

**Cross-Cutting**
- Security
- Operational Management
- Logging
Traditional Architecture Example

DoD NHIN gateway
CMS NHIN gateway

NHIN network

CONNECT
Entity Patient discovery WS
NHIN Patient discovery WS
Entity Doc Query WS
Entity Doc Retrieve WS
NHIN Doc Query WS
NHIN Doc Retrieve WS

Adapter MPI

Player discovery UI
Patient discovery public WS

INTERNAL SERVICES

Adapter component MPI
CCD generator
Adapter component Doc Registry
Adapter component Doc Repository
Document access control module
Audit logging

PATIENT SERVICE

DOCUMENTS SERVICE

CCD View Module

NHIN network

HIE
EMR system
Direct SES system

MESSAGING SERVICE

Documents repository
Clinical data repository

HIE
EMR system
Direct SES system

DoD NHIN gateway
CMS NHIN gateway

HTTP(S)
SOAP

Web browser
External system

HTTP(S)
SOAP

Web browser
External system

HTTP(S)

Web browser

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Microservices Architecture Design

- USERS
- Presentation services
- Service #1
  - DATA SOURCE
- Service #2
  - DATA SOURCE
- Service #3
- Service #4
  - DATA SOURCE
- Service #5
  - DATA SOURCE

UI
Microservices Architecture Example

![Diagram showing the layers and components of a microservices architecture.](image-url)
Application Development

Our development services include:

- Full-cycle application development
- Development of certain application modules, e.g. a BI tool
Our Development Approach

To reduce your time-to-market, we combine **iterative development** with lean thinking:

**Fast software delivery**

- **Stakeholders** & end users
- **Review & Feedback**
- **Stakeholders** & end users
- **Release**
- **Review & Feedback**
- **Release**
- **Final Release**

**Continuous improvement**
Challenges We Solve

In developing an enterprise software application, we focus on:

**Reliability and scalability**
To handle large data and traffic volumes, or solve complex tasks quickly

**Information security**
Multilayer protection from intruders and unauthorized access prevention

**Configuration and parameterization**
High level of flexibility and reactivity to changing demands

**Maintainability**
To ensure simple, fast and effective solution modifications in the future
For 27 years, ScienceSoft has been providing end-to-end testing services:

- **Performance testing**
- **Functional testing**
- **Localization testing**
- **Automated testing**
- **Manual testing**

**Test documentation** (test plans, test cases, etc.) to give the Customer a clear view of the application performance in different cases and simplify its modification in the future.
Our goal is to detect and respond to a problem **before** end users even know it exists.
Long-term Maintenance

- Change request processing
- Bug fixing
- 24/7 Help Desk services

Full-service packages for 1, 5 or 10 years, with an option to be prolonged when the service period expires
With every software development project, ScienceSoft’s Customer gets **a complete set of deliverables**, including:

- The solution tailored to specific business needs
- Full test documentation
- Well-documented source code
- Long-term maintenance
- 12-month warranty
Success Story

Assisted Living Management Software

Customer

US assisted living organizations

Solution

A complex solution consisting of modules for marketing, care team coordination, medication administration, patient health monitoring, risk management, billing and document management

Tools & Technologies

Ext JS, Sass, Java, Spring, Hibernate, Apache Maven, Apache Tomcat, MS SQL Server
Success Story

Mobile Number Portability System

Customer

European telecom provider with 1.4 mln subscribers

Solution

An automatic Mobile Number Portability system that enables users to easily switch service providers without the need to change their number

Tools & Technologies

Java, Perl, Tomcat, log4j, Oracle, JUnit, Spring, Hibernate, Mason

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Success Story

The World’s Largest PLM Platform

Customer

A global leader in collaborative solutions for the private label and branded goods industry

Solution

The product lifecycle management solution powering 32 large retailers and 12,000 manufacturers in 110 countries, which drives the development of products with $300+ bn in annual sales

Tools & Technologies

.NET, ASP.NET (WebForms, MVC), Classic ASP, NHibernate, ADO.NET; MicroStrategy, MS SQL Server, T-SQL
System for Well-log Data Tracking

Customer

European provider of IT solutions for oil and gas industry

Solution

The solution for automating well development process, which allows extracting, integrating, accessing well data and reporting it to the regulatory authorities

Tools & Technologies

Java, Spring, JUnit, Mockito, Jboss, Red Hat, Ext JS, PostgreSQL
Success Story

Trade Marketing Planning System

Customer

An international FMCG corporation with 82,000 employees and products sold in over 180 markets

Solution

The system consisting of 2 interconnected applications (a field planning tool and an integrated market platform) allows to create trade marketing plans and monitor them in real time in more than 60 countries

Tools & Technologies

ASP.NET MVC, ASP.NET Web API, WCF, Entity Framework, MS SQL Server; HTML, CSS, jQuery, Backbone.js, Underscore.js, RequireJS, iOS
Success Story

Cancer Drug & TPN Order and Manufacturing Software

Customer

A multinational pharmaceutical company with operations in over 100 countries and $15+ bn revenue

Solution

A centralized solution to cover generic and non-generic short-living chemotherapeutic drugs and TPN production, stock control, client information and financial transactions (direct sales)

Tools & Technologies

.NET, ADO.NET, ASP.NET, AJAX, VB.NET, JavaScript, Infragistics, Citrix server API, Crystal Reports