R3’s Professional Services

The ideal partner for your end-to-end blockchain journey
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At R3, we know developing, deploying and maintaining distributed ledger systems can be hard. That’s why we are committed to making your journey to production as easy as possible. R3’s Professional Services team provides a comprehensive suite of advisory and engineering services to help businesses accelerate the design, development, and deployment of blockchain solutions on the Corda platform, known as CorDapps.

The world’s leading software firms, companies and government institutions have already discovered that by working with our Professional Services team they can accelerate the evaluation and deployment of enterprise-grade distributed ledger networks and applications. Having advised the world’s largest institutions and system integrator partners since 2015, R3 brings deep expertise and industry best practice to bear. Our expanding global team of more than 50 solution engineers, delivery professionals and industry subject matter experts are available every step of the way so you can focus on what matters—deploying high-value blockchain applications to transform your operations and industry.

Many blockchain POCs don't make it to production...

"Of the many use cases, a large number are still at the idea stage, while others are in development but with no output"

McKinsey 2019

"90% of blockchain-based supply chain initiatives will suffer blockchain fatigue by 2023"

Gartner 2019

"Through 2023, business issues will have stopped more blockchain projects than technology readiness"

Gartner 2019

The Corda platform combined with R3’s Professional Services respond to this dynamic.
Your success is our success

Our Professional Services team has a proven track record in helping clients increase the success of their blockchain solutions and reducing the time to value for blockchain investments. Organizations have benefitted from our QuickStart Service for fast discovery, platform evaluation and solution design; brought in R3 engineers to augment existing teams; and leveraged the R3 ecosystem to execute multi-institution, global go-to-market trials to promote and test applications. And when it comes to delivery, you can rely on R3 best practices to de-risk production deployment, accelerate go-live, enable smooth upgrades and deliver 24/5 enterprise software support.

With our fast-growing partner network of over 350 organizations, we can team up with whoever you choose to ensure the success of your journey to production.

End-to-end services from ideation to production

Software providers and enterprises need to consider the right blockchain technology and infrastructure for their business. They need to understand how to design and test their applications, and how to govern, scale and manage these new networks. Whether you are just starting to explore Distributed Ledger Technology (DLT), taking a CorDapp to market, or getting ready to launch R3 knows these challenges well and is here to help. DLT doesn’t need to be complex. Getting to market needn’t be a slow process. And you can de-risk your deployment with the right support and best practice methodologies.

The size, scale and success of the Ivno Global Trial validated Ivno’s technology and financial design and confirmed the desire and demand for live deployment, leveraging the R3 ecosystem.

Daniel Halstead, Co-founder, Ivno
**Design, develop, deploy**

Our professional services suite enables you to embed blockchain expertise into every step of your journey with nine packaged services to choose from along the path to building a production application and network.

Our Professional Services team supports a wide range of Corda ecosystem participants, including app builders, app users and infrastructure partners. A project on Corda can be broken down into three fundamental stages—and our Professional Services team’s approach mirrors and supports this progression, all the way from product design, to go-to-market strategy and deployment.

Leveraging on the strength of Corda Enterprise, we brought full transparency to reconciliation activities, reduced operational risks and standardised the overall Spunta process. Through the continued collaboration with R3’s Professional Services and engineering team, we moved from pilot phase into production with the CorDapp, resulting in the Italian banking sector now using a DLT based application to process everyday transactions.

*Silvia Attanasio,*  
**Head of Innovation, ABI**
Design: Simplify blockchain complexity

1. Explore: Understand Corda key concepts, and start your team’s development journey, learn to deploy and operate corda nodes with our Training Service.

2. Create: Speed up solution design, prototyping and platform switching, and get a clear roadmap for success with the QuickStart Service.

3. Validate: Validate CorDapp design and architecture to de-risk deployment with the Design Review Service.

Develop: Accelerate time to production

4. Team-up: Augment your in-house development team with R3 Engineers-as-a-Service to accelerate your build and ensure best practice.

5. Go-to-market: Spin-up a test network, run a market simulation and acquire early adopters with the Go-to-market Trial.

6. Succeed: Work with a Technical Account Manager as your advocate within R3 for faster time to production and to maximize the value of Corda across the business.

Deploy: Ensure growth and long-term success

7. Verify: Verify your launch with pre-flight quality testing covering network compatibility, performance and scalability in the R3 Test Lab.

8. Launch: Implement a best practice deployment strategy harnessing our expertise in node deployment for the enterprise with our Deployment Services.

9. Evolve: Make upgrading your distributed architecture easy with our Upgrade Services.

Partnering for Success:

B3i—evaluating CorDapp and infrastructure design

R3’s Professional Services helped B3i, a major insurance consortium, to switch from IBM blockchain (based on Hyperledger Fabric) to Corda—and then to go live with its first production application for the industry.

SIX Digital Exchange (SDX)—Rapid co-development

SDX is a new digital asset exchange. R3 has provided developers, architects and consultants to work alongside SDX, coding together. This enabled the exchange to bring the first prototype of the SDX solution to market in just a few months.

HQLAx—rigorous quality assurance and testing for successful production deployment

HQLAx is a new liquidity and treasury management solution. R3 supported the consortium build out, technical implementation and launch on Deutsche Böerse infrastructure, all the way through to successful go live at the end of 2019—meeting the stringent requirements of highly regulated market infrastructure.
Why use R3’s Professional Services

Expertise
Access a team of more than 50 Corda business and technology experts across the globe, dedicated to helping participants in the Corda ecosystem explore, design, develop and deploy CorDapps—applications built on Corda—better and faster.

• 50+ blockchain engineers, with access to the core engineering team who built Corda
• Deep Corda and distributed systems knowledge
• Non-functional expertise: consortium management and network governance

Experience
We work directly with the Corda platform teams, and have collective experience across hundreds of clients and projects, all feeding into our key learnings and delivery toolkit.

• Hundreds of ecosystem engagements
• 150+ successful projects and more than 200 nodes live globally
• Good practice processes and blueprints for success

Ecosystem
We draw on our strong and extensive collaborative ecosystem to bring in partners as needed to optimize, accelerate, and scale delivery.

• Access to the largest blockchain ecosystem
• Early adopter access and go-to-market
• Collaboration is in our DNA

Simplify complexity of distributed systems
Faster time to value for DLT investments
De-risk deployment and scale-up business
Explore the Corda platform with the Training Service

Explore: Understand Corda key concepts, start your team’s development journey and learn how to deploy and operate Corda nodes.

Just getting started with blockchain? Or are you ready to deploy and operate your own Corda network? The Training Service has a selection of courses to boost your team’s Corda knowledge and capabilities.

Benefits of the Training Service

• Identify learning priorities to ensure your team have the skills to deliver
• Four training courses with a mix of presentation, demonstration and hands-on exercises
• Tune the training to your specific use-case to ensure you are getting the most value

Corda for Developers

Part 1
• The genesis of Corda
• Corda Key concepts
• Environment set up
• First look at the code

Part 2
• Your first CorDapp
• TDD approach
• States and contracts
• Transactions
• Flows
• Clients and GUI
• Deploy your cordapp

More Corda for Developers

Part 3
• Tokens SDK
• Accounts SDK
• Confidential Identities
• Plus more

Corda Deployment

Part 4
• Corda Networks
• PKI considerations
• Node deployment
• CorDapp deployment
• Corda Firewall
• Automation
• Multi-node deployment

Corda for Operations

Part 5
• Corda components
• Node operator
• Business network operator
• Network operator
• Monitoring
• Problem isolation and resolution
• Change management
• Resiliency
• Performance
• Security

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Speed up solution design with the QuickStart Service

**Create:** Speed up solution design, prototyping and platform switching and get a clear roadmap for success.

If you are just getting started with your distributed app development, or if you are looking to switch your application to Corda, the QuickStart service provides a fast, holistic design service, covering architecture, application and business network design. By using the service you will gain a clear roadmap for your application design, its path to production, and the workplan to support your journey, leveraging Corda design best practices.

**Benefits of the QuickStart Service**

- Model your application, network and technology needs in two weeks
- Build a realistic roadmap to production and de-risk development
- Confidently migrate to Corda, based on experience of over 30 organizations switching from other blockchains

**Our approach: a suite of componentized services**

- **Discovery Workshop**
  - Define the minimum viable product

- **Business flow and process modelling**
  - Map real world business processes to a decentralized application

- **Business network design**
  - Identify roles, design and privacy model
  - Governance and ops guidance

- **QuickStart design documentation**
  - Presentation of QuickStart design document
  - Marketplace onboarding
  - Wrap-up with customer and next steps

- **Environments and tooling review**
  - Create end-to-end roadmap
  - Discover tooling options
  - Implement demo network (optional)

- **CorDapp design and modelling notation**
  - Target CorDapp architecture
  - Development blueprint
  - Corda design language training (optional)
Increase quality and future adoption with the Design Review Service

Validate: Validate CorDapp design and resilience to de-risk deployment

The Design Review service contributes to your success by identifying risks and improvements in CorDapp design, Corda architecture and deployment and operational readiness. By using the service R3 reviews CorDapp and business network design, and architecture, assists in identifying potential flaws, and aligns your application to proven Corda design practices. We then provide observations and recommendations to ensure the highest possible quality and resilience of your application.

Benefits of the Design Review Service

- Validate solution design and quality with best-practice design patterns and identify areas for improvement
- Assess the target operating model to maximize privacy, scalability, performance, resiliency, and security
- De-risk deployment by benchmarking against R3’s deployment methodology

Our approach: A two-four week structured engagement

Two weeks before
- Discovery and assessment questionnaire
- Share and review CorDapp design docs

Week 1
- Kick-off discovery workshop
- R3 analysis and synthesis
- Co-located with customer team

Week 2
- Ongoing Q&A with customer
- Report on findings and recommendations

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Accelerate time to market with R3 Engineers-as-a-Service

Team-up: Augment your in-house development team

We like to code with our customers. With R3 engineers embedded in your business, your development team can access the expertise and collective knowledge of hundreds of blockchain deployments. By augmenting your team with R3 engineers you will gain greater long term independence to maintain and expand your blockchain solution.

Benefits of R3 Engineers-as-a-Service

• Upskill and mentor in-house development teams to increase independence over time
• Co-create with engineers that have delivered global production applications
• Adopt and gain value from the latest features with close Corda product roadmap alignment
• Collaborative approach to fit your team
• Hands on software development with your team
• Support on Design and Deployment topics as needed

Our approach: Corda engineers with you, every step of the way

2–4 embedded engineers

Pair programming

Corda best practice knowledge transfer
Secure early adopters with the Go-to-market Trial

Go-to-market: Spin-up a test network, run a market simulation and acquire early adopters

Gaining market validation and initial acceptance from business users, as well as ongoing proof of business value is a critical part of taking your blockchain solution to market. To date the program has reached over 200 organizations across the globe, deploying hundreds of customer nodes to our test networks and helped businesses reach an audience of willing network participants early in their go-to-market journey. If you want to run a meaningful trial of your CordApp, with real-end users, our Go-to-Market trial can provide meaningful scale and market validation.

Benefits of the Go-to-market Trial

- Run a multi-institution, global market simulation harnessing R3’s vibrant ecosystem of 350+ corporates, FIs and technology firms
- Leverage the R3 sales team to drive trial adoption
- Gain valuable end-user feedback to further enhance your solution and deployment

Our approach: Test your application with early adopters and the R3 ecosystem

- Design review
  - Validate solution design and quality
  - Assess the target operating model
  - De-risk deployment
- Learn
  - Online materials and webinars on Corda, the use case and Corda Network
- Deploy
  - Guided deployment of the CorDapp to Corda Testnet
- Trial
  - Multi-institution trial to replicate real-world scenarios
Increase alignment with R3 with a Technical Account Manager

**Succeed:** Faster time to production and maximize the value of Corda across the business

An R3 Technical Account Manager (TAM) is your trusted advocate and partner. The TAM provides strategic technology guidance and best practices as you progress your DLT project by offering advice or assembling focus teams to jump-start each stage of the journey. With a TAM, you will have direct insight into Corda’s latest features and product roadmap to plan more strategically for the future.

**Benefits of a Technical Account Manager**

- Gain a champion for your business and technical requirements within R3
- Be the first to know about the latest enhancements and value-added features of Corda
- Explore new business opportunities through deeper collaboration

**Our approach: A champion for your business**

- **Advocate**
  - Trusted advisor
  - Corda roadmap
  - direct Q/A

- **Communicate**
  - Release briefings
  - Your voice within R3

- **Explore**
  - Co-creation
  - Joint propositions
  - Partnerships and funding
Ensure enterprise-ready deployment with the Test Lab

Verify: Verify your launch with pre-flight quality testing covering network compatibility, performance and scalability.

The Test Lab can assist you with the successful adoption and go-live of CorDapps, providing you with enhanced visibility on performance, compatibility and stability with advice provided by experienced Corda engineers. Following a review of your current test procedures, we identify a strategy to best support your development group. We then develop non-functional tests and execute on the R3 performance grade Test Lab. You will be provided with a review of your application's strengths and weaknesses based on the test results, and recommendations on how to address any pre-deployment requirements.

Benefits of the Test Lab

- Accelerate pre-production QA testing leveraging R3's proven automation frameworks
- Maximize solution performance, efficiency and scalability with R3 best practice tools and guidance
- Receive an actionable report to optimize your deployment

Our approach: Best-practice testing services for assured deployment

- Documented test strategy and plan
- Test infrastructure design
- Mock/stub approach
- Scalability testing
- Performance testing
- Security testing
- Operational testing
- Upgrade testing
- Chaos testing
- Test Labs report
- Optional ongoing subscription
- Test with new Corda platform versions
- Test with other applications
Confidently deploy to market with R3’s Deployment Services

**Launch:** Implement a best practice deployment strategy harnessing our expertise in node deployment for the enterprise

Having a production grade deployment strategy is essential to any CorDapp’s success. The Deployment Service starts by establishing your deployment requirements, whether it be for a single node, a managed service, or a full Corda network. A series of workshops will assist you to generate fine-tuned deployment blueprints and develop automated deployment scripts based on R3’s base templates. When the deployment scripts are ready, we work with you to support you on your ongoing deployment journey.

**Benefits of Deployment Services**

- Reduce operational complexity with structured node deployment services
- Speed-up deployment with production blueprints and configurations based on hundreds of deployments
- Gain flexibility in node deployment on the chosen hosting infrastructure of the network and end-users

**Our approach: Structured deployment from setup to on-boarding**

- **Deployment workshop**
  - Collaboratively work through deployment options, DR/HA, on-prem/cloud, internet/private, HSM etc.
  - Plan for enterprise deployment requirements

- **Blueprints and custom automation templates**
  - Creation of infrastructure and deployment blueprints
  - Customize deployment templates (e.g. using Kubernetes, Ansible, Terraform)

- **Deployment support**
  - Support the deployment of your Corda nodes, using output from the previous stages

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Reduce the complexity of distributed technology upgrades with the Upgrade Service

Evolve: Make upgrading your distributed architecture easy

Our Upgrade Service provides you with support for smooth and successful upgrades to your Corda deployment. Whether you are migrating your Corda Open Source project to Corda Enterprise, updating to the latest version of Corda Enterprise, or rolling out an updated CorDapp across your network, R3 is able to provide best-practice guidance at all stages of your project. The Upgrade Service covers the entire journey of an upgrade, tailored to your deployment - from highlighting required code changes and producing test coverage plans, to defining, supporting and executing a successful upgrade plan.

Benefits of the Upgrade Service

- Define an upgrade strategy based on specific upgrade requirements and best practices in distributed systems
- Receive ongoing advice whilst planning for success with regular engineering and delivery reviews
- Securely roll-out upgrades to the distributed business network and receive hands-on support throughout the process

Our approach: Strategically plan and faultlessly execute upgrades
Fast-time to market with the Minimum Viable Product Package

One of the most critical points on your path to delivering a new blockchain product is the successful launch of a Minimum Viable Product (MVP). This often unlocks further project or company funding, informs go, or no-go decisions for further development, or is needed to test product-market fit.

R3 has supported a number of organizations in the transition from early ideation or POC stage, to MVP through a twelve week program, delivered through the MVP package. This is a blend of three distinct professional services offerings, bundled for fast and confident delivery of a high-quality and demonstrable application:

**Week 1**
- The QuickStart Service

**Week 12**
- Engineers-as-a-Service
- The Deployment Service

The objective is to support you in delivering a fully-working MVP within twelve weeks with the product scope tuned appropriately to the time and development capacity available in your team. The service is scalable with the appropriate number of R3 Solutions Engineers deployed to support you in your development, once the design is completed via the Quickstart Service.

Light-touch deployment support services are also included, so the output is a fully working MVP ready for use, to meet your organization’s desired outcomes.

**You provide:**
- The business idea
- The specific use-case
- Any current designs or code (as applicable)
- Product owner
- Project framework/approach (e.g. Agile, 6*2 week sprints is a common approach)
- Your development team

**We provide:**
- Solution architecture services to review and design the product with you using CorDapp Design Language (CDL)
- Capacity in your sprints
- Deployment support

For more information: Contact us

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About R3

R3 is an enterprise blockchain software firm working with a broad ecosystem of more than 350 participants across multiple industries from both the private and public sectors to develop on Corda, its open-source blockchain platform, and Corda Enterprise, a commercial version of Corda for enterprise usage.

The Corda platform is already being used in industries from financial services to healthcare, shipping, insurance and more. It records, manages and executes institutions’ financial agreements in perfect synchrony with their peers, creating a world of frictionless commerce. Learn more at r3.com and corda.net.