

# DXterity Solutions

## AI - Code Writing Code™

### Executive Brief

## Introduction

The world is undergoing digital transformation, using data to become faster, cheaper, and more convenient to customers. Companies, schools, churches, and governments worldwide collectively invest trillions of US dollars each year in technology to become more competitive and more profitable. Emerging technologies to deliver quality software solutions are core to those efforts to attain digital transformation and eliminate technical debt. DXterity8 (DX8) uses artificial intelligence to automate the construction of full-stack, large enterprise-scale software solutions, to produce lower-cost, high-quality solutions, at revolutionary speeds.

*"The only software automation tool in the world that retains custom code upon regeneration." - Head of Global Consulting Services of Major Technology Company*

DX8 AI – Code Writing Code™ is architected to work seamlessly with CI/CD pipeline management systems to leverage each developer's effort and efficiency 5-6 times faster. The DX8 platform rapidly prototypes, builds new applications to scale, eliminates problematic legacy applications, and migrates and transforms data. As a result, the digital transformation pathway is dramatically shortened, in order to remove technical debt and project backlog, achieve competitive effectiveness, reduce the total cost of operations over the entire lifecycle of digital solutions, strengthen security, and accommodate rapid decision-making throughout the enterprise.

Despite all these benefits, the path is fraught with risk. The risk of failure to transform or to adopt ineffective tools and solutions which inhibit transformation leaves organizations vulnerable to competitors and disappointed customers, and ultimately result in reduced or lost profits. Effective tools must:

- Be fast, efficient, effective, and agile
- Promote seamless integration
- Provide inherent security at every level
- Provide fully flexible architecture and operate cloud-native, on-prem, and hybrid
- Be agnostic to vendors, tools, and environments
- Automate every possible step to remove potential human error
- Decouple compute and storage
- Reduce the cost and effort to enhance, support, and maintain IT systems
- Combat “vendor-lock” – zero dependencies on tools and uses industry best standards with no proprietary code – to create a net reduction in lifecycle costs

***DX8 meets each of these key tenets of effective solutions. See our white paper for additional details.***

## Technology Overview

DX8 AI – Code Writing Code multiplies a developer’s effort and efficiency by 5-6 times, to deliver software projects in a third of the time with less than half the number of developers per project. DX8 is an agile productivity platform, ideal for DevSecOps, as it remains agnostic to other tools, environments, and vendors.

Extensible source code for full enterprise solutions, that includes fully hydrated API layers, is constructed in minutes with baked-in security. Updates, bug fixes, and enhancements to the source code are also accomplished in minutes, while automatically keeping the code tightly bound to the data and in sync with the schema over the lifecycle of the application. The total cost of the enterprise application lifecycle is reduced to a fraction of current costs. Budgets can be repurposed and simultaneously deliver maximum effectiveness over the software application lifecycle.

**DX8 rapidly modernizes old applications by authoring new code using the database rather than code conversion. DX8 also rapidly produces prototypes of fully-scalable new enterprise applications and enables rapid transformation and migration of data sources.** DX8 provides flexibility and control for the developer working to produce solutions for on-prem, hybrid, or for containerized multi-tenant, cloud-native and deployed environments and adheres to established enterprise standardization. Also, updates to enterprise standards are delivered to all solutions across the enterprise in minutes while the generated code is always tightly bound with the data and in sync with the schema, all while saving all extended, customized code.

## Platform Capabilities – Hyper Automation, Agility and Stability

Full enterprise source code construction is automated and deployed in any environment. The automated output is rapid, completed in a few minutes, and standardized across the enterprise. DX8:

- Generates extensible, core source code in Java, .Net, or .Net Core.
- Builds fully hydrated web API layer (REST, GraphQL, Odata) to represent the entire data source, not just a table or an entity.
- Delivers extensible, customizable web user interface (UI) tightly coupled to the database
- Provides solution files
- Generates baked-in enterprise-level security
- Delivers unit testing
- Includes full code documentation
- Provides libraries
- Generates logic tiers
- Performs quality assessment of the data source, identifies problem areas and automates scripts to resolve the problem areas
- Constructs configurable abstracted data models of MySQL, SQL Server, DB2, PostgreSQL or Oracle

The source code is fully extensible for inclusion of additional custom business rules and to extend the UI. The foundation of the UI is well architected and organized, tightly coupled to the abstract model built with TypeScript, Vue3, and Quasar.

## Value Summary

DX8 AI Code Writing Code platform is a paradigm shift in how software is developed. DXterity auto-generates fully functional enterprise-scale software and authors millions of lines of code in minutes. The DXterity authored code is pristine, senior-level, secure, non-vendor locked, future-proof, and extensible code in multiple languages. This paradigm shift in software development is a positive disruptor to accelerate digital modernization through continuous modernization in a decentralized model: standardize code of old applications, fully-scaled prototyping, and new software applications.