

Radiant Nuclear — ADVANCED NUCLEAR ENERGY · MANUFACTURING EXECUTION & COMPLIANCE

From manual chaos to one audit-ready system of record — fast enough for reactor test.

“It shows that, coming from the supply chain team, man, they're keeping those lines really updated. A pleasant surprise.”

Marian Gilroy
OPERATIONS LEAD, RADIANT NUCLEAR

PO LINE TRANSACTIONS	PLATFORM USERS	CUSTOM ENGINEERING PROGRAMS
210,000+	197	13+

01 AT A GLANCE

Radiant is building Kaleidos, the world's first mass-produced portable microreactor, scaling from engineering development into serial, nuclear-grade manufacturing. ION Factory OS became Radiant's single system of record for manufacturing execution, procurement, and compliance — built out by First Resonance's embedded engineering team (Forward Deployed Software Engineering, or "FDSE") through 13+ custom-built workflows.

02 THE CHALLENGE

As Radiant moved into serial production, informal processes could no longer hold: parts synced from its PLM system had no way to distinguish released revisions from drafts, procurement errors risked building to the wrong part, and NQA-1 (the nuclear industry's quality-assurance standard) audit prep demanded role-based approvals and unbroken traceability — requirements, not nice-to-haves.

03 WHY ION

Radiant selected ION in 2023, choosing a platform purpose-built for regulated scale-up manufacturing over a traditional ERP. Three years in, that decision has become a hands-on engineering partnership.

04 SOLUTION

First Resonance's FDSE team built and adapted ION directly against Radiant's workflows — automating purchase-order approvals, linking every receipt, run, and quality record into a single traceable chain, and evolving factory-floor kitting into a streamlined, pick-based model.

**FDSE Engagement Model**

Forward-deployed engineers embedded with Radiant's team, not self-service software

**Traceability-First Architecture**

Every record linked into one operational lineage for NQA-1 audit readiness

**Built for Scale-Up**

Purpose-built for the development-to-serial-production transition

**Compliance Posture for Government Work**

FedRAMP equivalence and CMMC alignment supporting Radiant's certification path

05 RESULTS

197

platform users (140+ monthly active)

210,000+

PO line transactions logged

13+

FDSE programs delivered

NQA-1

ION workflows integral to Radiant's NQA-1 certification pathway



I have a sneaking suspicion we may need to utilize even more FDSE time than initially expected. These have been pretty critical to rolling out some workflows, and critical to a lot of the regulatory requirements that are driving this demand.”

MARIAN GILROY · OPERATIONS LEAD, RADIANT NUCLEAR