instem
Discover. Accelerate. Advance.

The Journey of a Molecule

At Instem, we're committed to supporting our clients with innovative, leading SaaS platforms and services that empower scientific discovery, accelerate research studies, and advance human health.

Scroll down to explore our range of solutions supporting each stage of the drug discovery process from Target Identification to IND Submission.

The following Instem solutions ensure quality and compliance, across every stage of the drug discovery process.

Matrix Gemini™ LIMS
Flexible LIMS for Modern Laboratories

eQCM™
The All-In-One Digital Quality and Document Management System

Compliance Builder™
One Platform for Total Compliance

01 Target Identification

Goal: Identify and validate therapeutic targets by understanding target biology and potential toxicological risks.

Instem Solutions

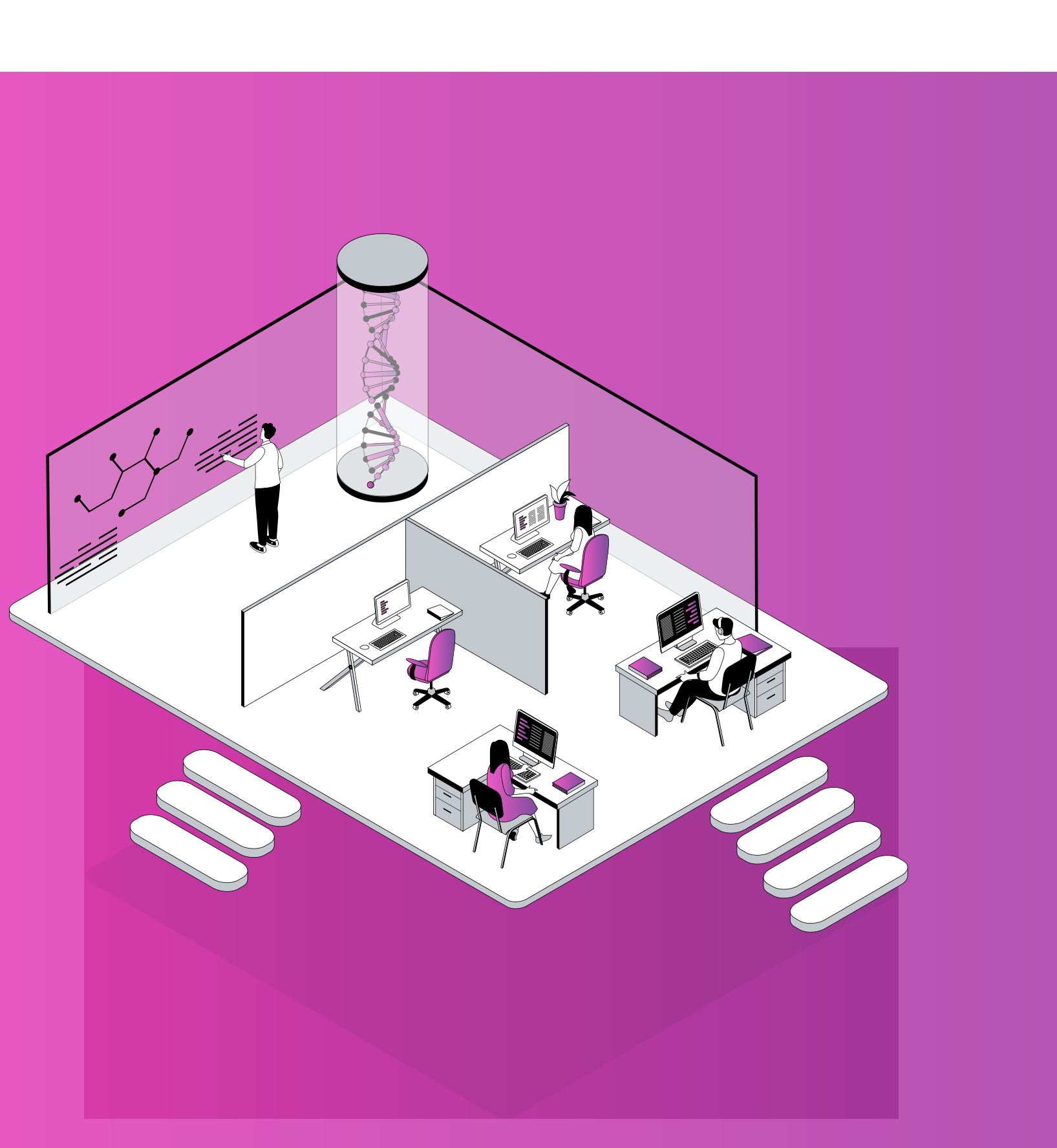
KnowledgeScan™ Target Safety Assessment Service
Delivering Insightful Safety Assessments

Centrus®
Safety Intelligence in Discovery

> "During Target Identification, Centrus® and KnowledgeScan™ bring together critical biological and safety data so researchers can pinpoint promising targets faster and with greater confidence, helping new therapies move sooner toward the patients who need them."
> DR BRENDA FINNEY, PRODUCT DIRECTOR

TARGET IDENTIFICATION FACT

Over **60%** of first-in-class drugs approved in the last decade were developed against genetically validated targets, making human genetics one of the strongest predictors of downstream success.



02 Discovery

Goal: Identify initial compounds ("hits") using computational and experimental approaches.

Instem Solutions

Advance™
Advanced Weight of Evidence Assessments

Centrus®
Safety Intelligence in Discovery

BioRails®
Simplifying ADME/DMPK Workflows

Advance™ accelerates early Discovery by rapidly delivering regulator-aligned safety insights helping teams reduce costly timelines, streamline risk assessment, and make confident decisions sooner.

DISCOVERY FACT

A single high-throughput screening campaign may evaluate 100,000 to **over 2 million** compounds, generating terabytes of data before just a handful of hits are selected.

03 Lead Optimization

Goal: Refine hits into leads with optimized potency, selectivity, and drug-like properties, incorporating early toxicology insights to minimize safety risks.

Instem Solutions

Leadscope Model Applier™
Advancing *In Silico* Toxicology Insights

Predict™ *In Silico* Tox Service
Providing Expert *In Silico* Toxicology

BioRails®
Simplifying ADME/DMPK Workflows

Centrus®
Safety Intelligence in Discovery

Matrix Gemini™ LIMS streamlines laboratory data and sample management by reducing manual tasks, automating workflows, and accelerating turnaround times—delivering accurate, audit-ready results that drive efficient Lead Optimization.

LEAD OPTIMIZATION FACT

Lead optimization typically takes **1–2 years** and involves hundreds of compound iterations, as chemists balance potency, solubility, metabolic stability, and off-target risk.

04 Preclinical Efficacy

Goal: Confirm mechanism of action and therapeutic effect in disease models.

Instem Solutions

Climb™
Modernizing *In Vivo* Study Management

Morphit™
Streamlining Discovery Research Data Management

Logbook™
Digitizing Lab Experimentation and Data

45%
REDUCTION IN STUDY DESIGN TIMES

Climb™ speeds Preclinical Efficacy by streamlining non-GLP *in vivo* study setup, scheduling, and data capture, significantly reducing study design time through predefined templates that ensure consistency and efficiency.

READ THE CASE STUDY

PRECLINICAL EFFICACY FACT

Although many therapies show encouraging efficacy in animal studies, only about **5%** ultimately achieve regulatory approval for human use. This highlights a substantial gap between preclinical findings and clinical outcomes.

05 Toxicology

Goal: Conduct safety studies, including toxicology, safety pharmacology, genetic and reproductive toxicology.

Instem Solutions

Provantis®
Streamlining Preclinical Study Management

Cyto Study Manager™
Optimizing Genetox Assays

NOTOCORD-hem™
Accelerating Physiological Data Insights

Leadscope Model Applier™
Advancing *In Silico* Toxicology Insights

50%
REDUCTION IN REPORTING TASK TIMES

Provantis® accelerates toxicology workflows by streamlining study design, data capture, and reporting in a single GLP-compliant platform, helping teams reduce administrative burden, shorten turnaround times, and focus more on advancing safe therapies.

READ THE CASE STUDY

TOXICOLOGY FACT

Regulatory toxicology programs routinely generate **tens of thousands** of individual data points per compound, including histopathology, clinical chemistry, cardiovascular, and genetic toxicity endpoints.

06 CMC Readiness

Goal: Develop and scale manufacturing processes, formulations, and analytical methods.

Instem Solutions

Leadscope Model Applier™
Advancing *In Silico* Toxicology Insights

Centrus®
Safety Intelligence in Discovery

Logbook™
Digitizing Lab Experimentation and Data

> "Leadscope enables rapid, science-based assessment of mutagenic impurities and extractables/leachables using advanced *in silico* toxicology. Aligned with ICH guidelines, Leadscope plays a critical role in impurity qualification, reducing costly synthesis and testing while ensuring patient safety through transparent, defensible evaluations."
> DR CANDICE JOHNSON, PRODUCT MANAGER

CMC READINESS FACT

Preparation of GMP-compliant drug substance and drug product for IND typically takes **6 to 18 months**, depending on modality and process maturity.

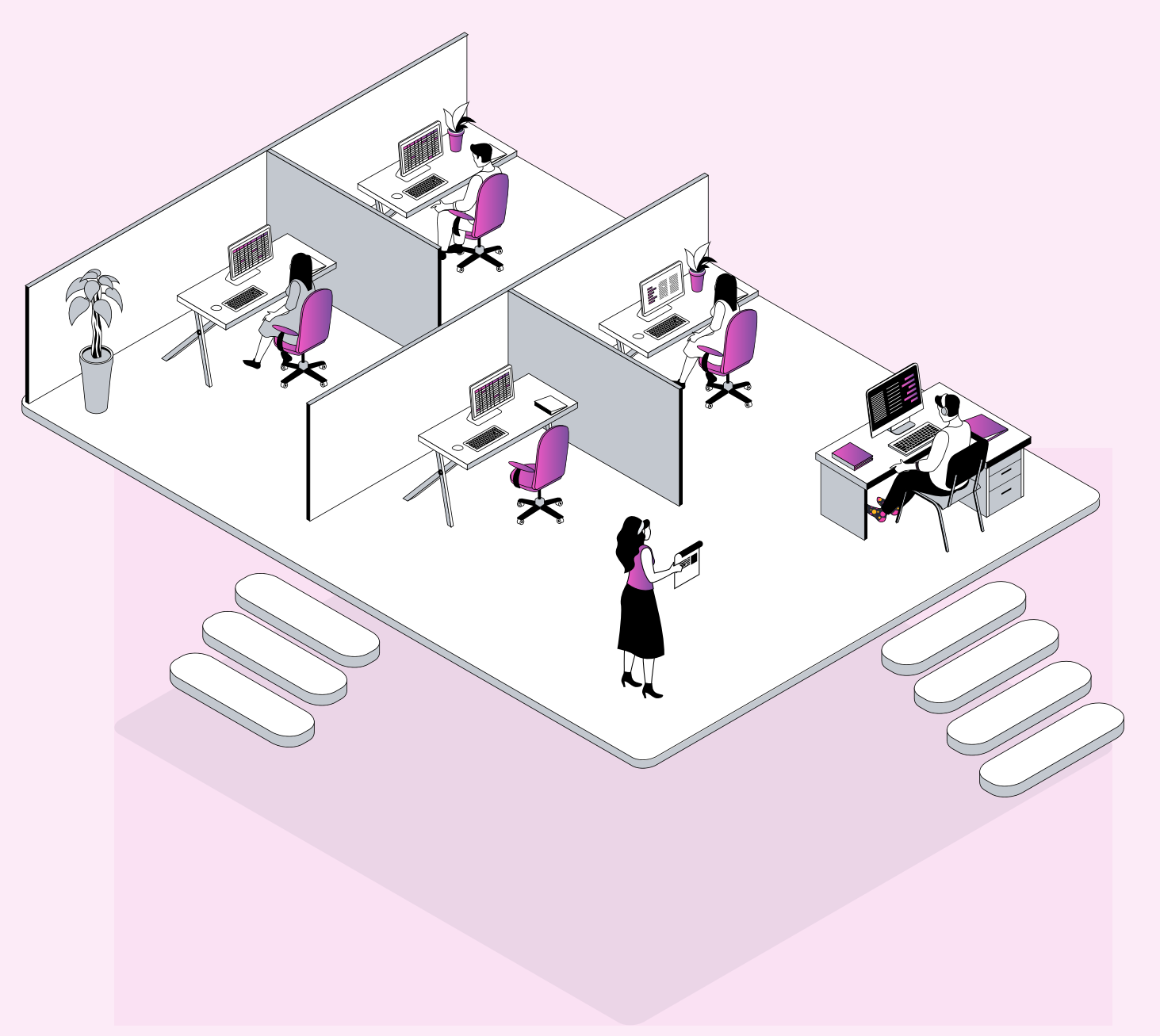
07 IND Package Preparation

Goal: Compile nonclinical, CMC, and protocol documentation into a regulatory-compliant IND submission.

Instem Solutions

Submit™
Enabling High-Quality SEND Submissions

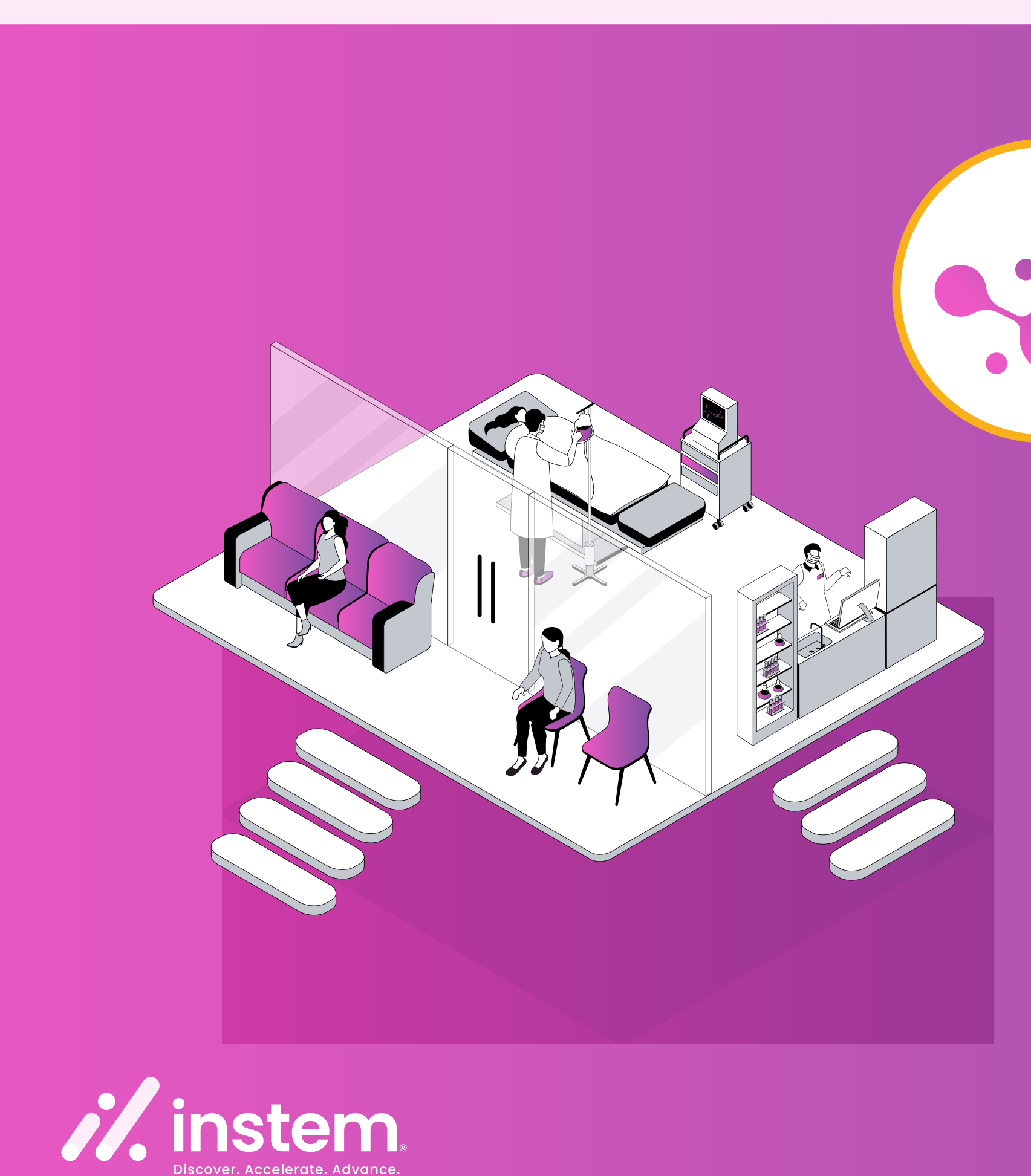
SEND Advantage™ **Services**
Simplifying Submission-ready SEND Conversion Processes



> "At the IND preparation stage, Submit™ simplifies creation and management of high-quality SEND datasets, enabling regulatory teams to submit compliant preclinical data with confidence, helping sponsors accelerate review timelines and bring new therapies to patients faster."
> MARC ELLISON, PRODUCT DIRECTOR

IND PACKAGE PREPARATION FACT

In 2024, **5621** Investigational New Drug (IND) SEND dataset submissions were made to the FDA from 17 different countries.



Partner with Instem to accelerate discovery, strengthen data quality, and bring safer, more effective therapies to market faster.

Contact us today to learn how our solutions can support your journey from early research through to regulatory submission.

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