

From Statistical Programming to AI Automation in Data Management



A Cross-Departmental Tech Journey

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DATE | confidentiality level

The Law of the Instrument

“I suppose it is tempting, if the only tool you have is a hammer, to treat everything as if it were a nail”



ADS Experience: The Starting Point

Stepping outside from what we knew



- We joined the Analytical Data Science (ADS) team
- No clinical background
- Transition: Python → SAS and R
- Marcia: Phase 3 oncology study (FDA submission)
- Irene: Phase 3 ophthalmology study
- Flood of acronyms

ADS Experience: Programming hurdles

Challenges & Learning Curve

Tool	Strengths	Challenges
 SAS	Handles complex tasks, industry standard	Steep learning curve, macros unfamiliar, clunky interface with Entimice
 R	Flexible, strong analysis & visualisation, package creation	Creativity sometimes limited by standard packages, troubleshooting internal packages
 Python	Flexible, ML-ready, open source	*Not widely used in ADS work

Exploring Two worlds: AI in Data Management

Blending structure with creativity

- Wanted to continue building Python skills & creative problem-solving
- AI increasingly shaping pharmaceutical workflows
- Opportunity to streamline tasks & reduce manual work
- Data Management AI team: develops automation use cases for clinical trials
- Perfect alignment with curiosity and growth goals

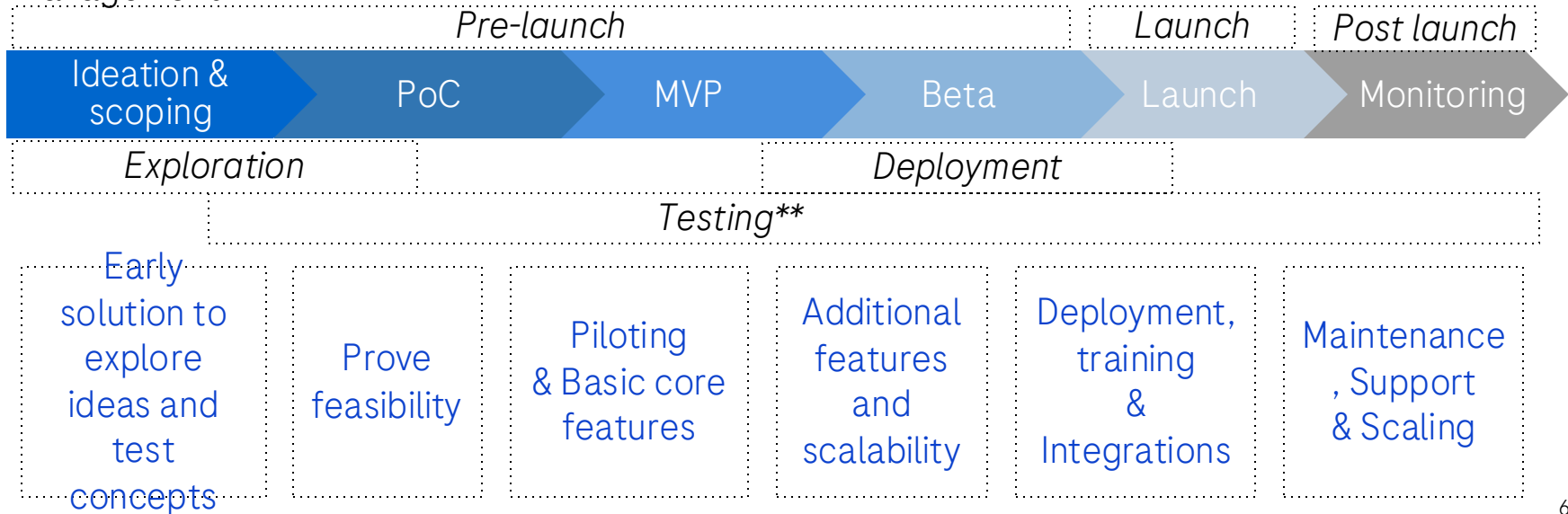


The Data Management AI Use Case Journey

A step-by-step path from concept to deployment

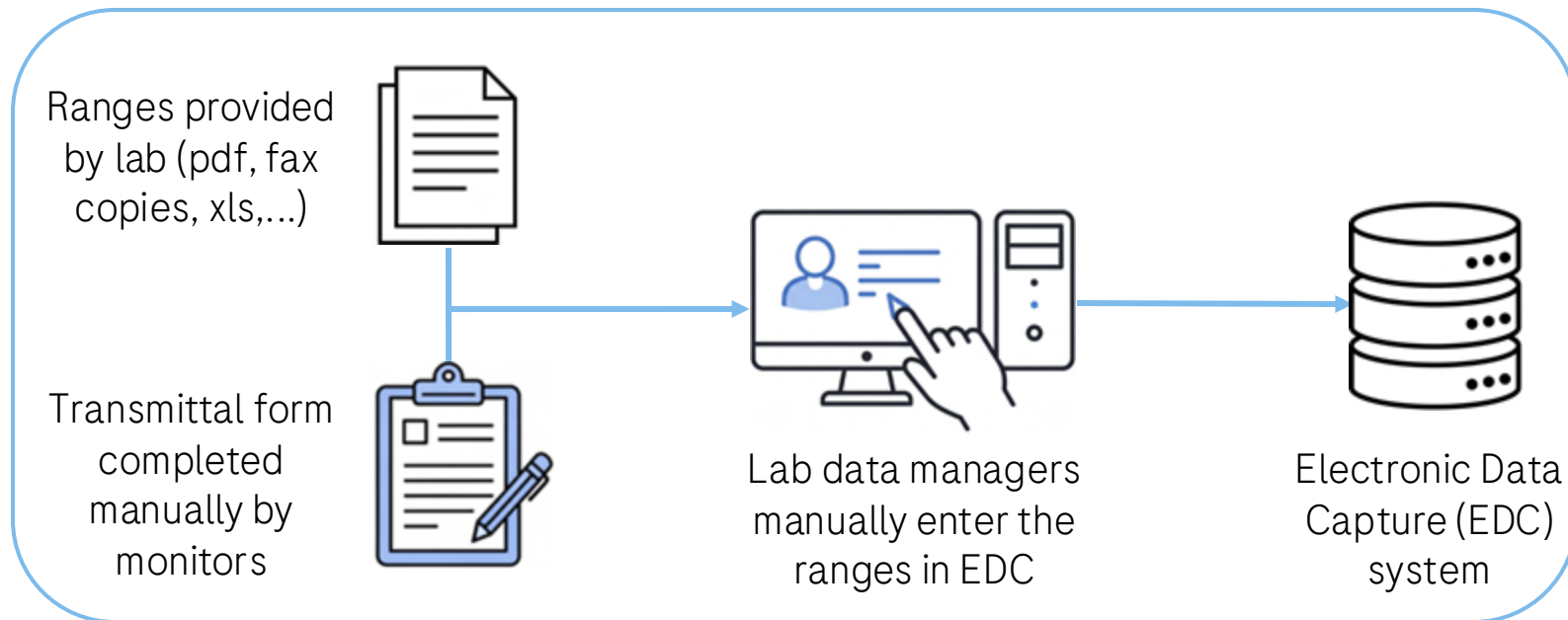
Data Management AI team: develops use cases → projects tackling challenges inside Data

Management



Use Case 9: Local Lab Ranges Management

Current Lab Ranges Management Process



Use Case 9: The Pain Points of Today's Process

Why managing local lab data remains slow and error-prone

Low quality
data formats



Manual entry and
repetition



Delays,
duplicates &
queries

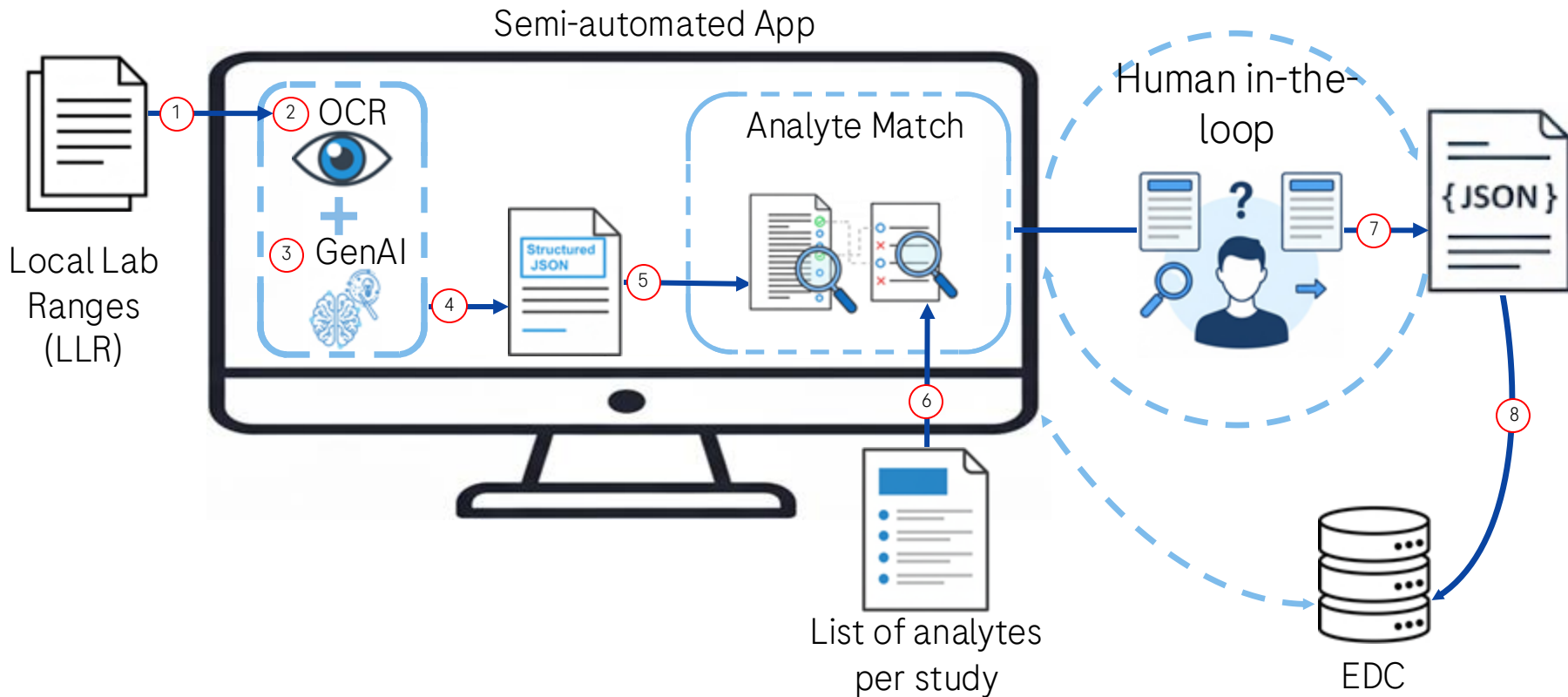


High resource
consumption



Use Case 9: From Manual Entry to Smart Automation

How the New Approach Works



Use Case 9: Project Work Style

From Experimentation to Impact

Step 1: Explore & Experiment

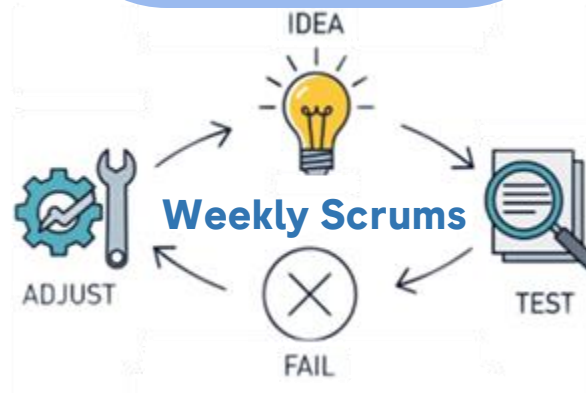
- Tried new tools and creative approaches;
- Explored different methods.

Step 2: Iterate & Learn

- Tested, failed, and adjusted;
- Turned failures into actionable insights.

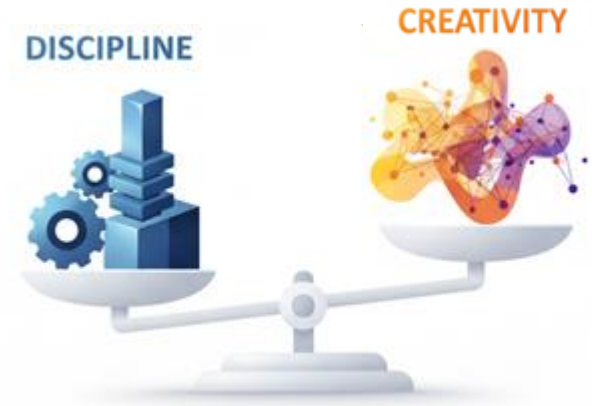
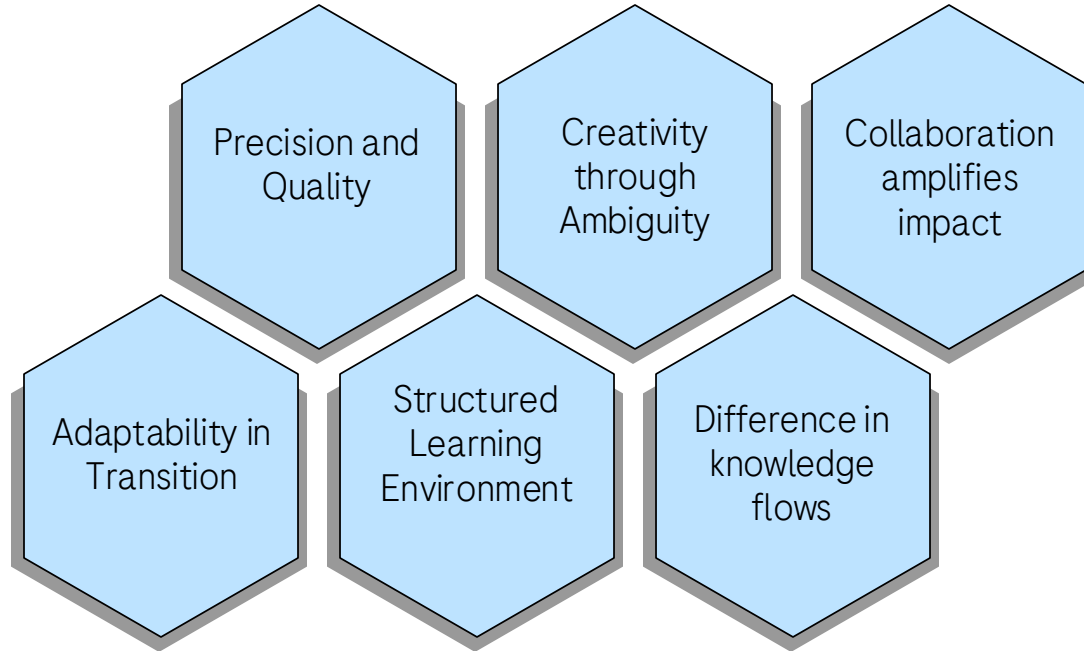
Step 3: Apply & Improve

- Implement practical solutions;
- Integrate insights for smarter workflows



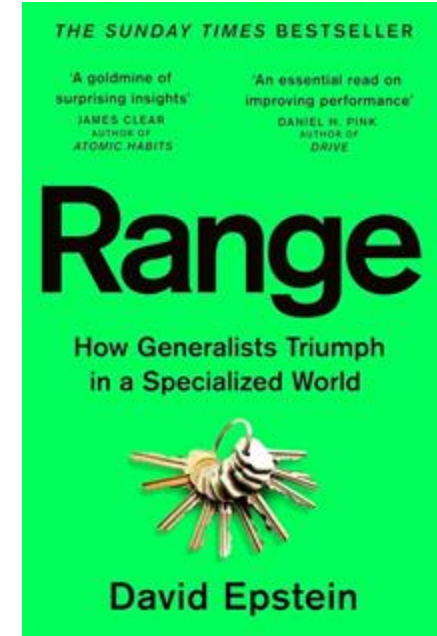
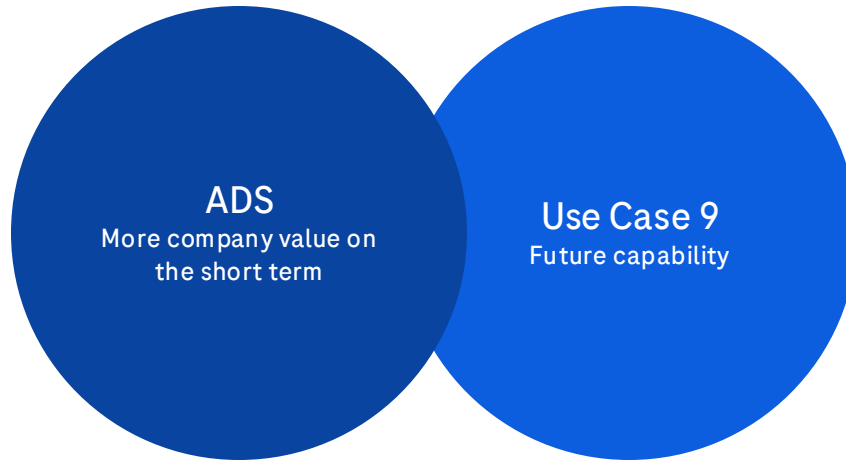
Adaptation Across Worlds

How the Two Departments Operate Differently



Cross-Functional Development

From Delivering Today to Building for Tomorrow



Key Takeaways

Try new things → curiosity drives growth

Collaboration matters → departments are interconnected

Avoid narrow thinking → apply the right tool for each problem

Embrace AI → adaptability is key

Think big picture → impact on clinical decisions and patients

Doing now what patients need next