

**Connecting the dots to
shape our future.**

The exciting journey of an evolving Statistical Programming team

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Inspired by **patients.**
Driven by **science.**



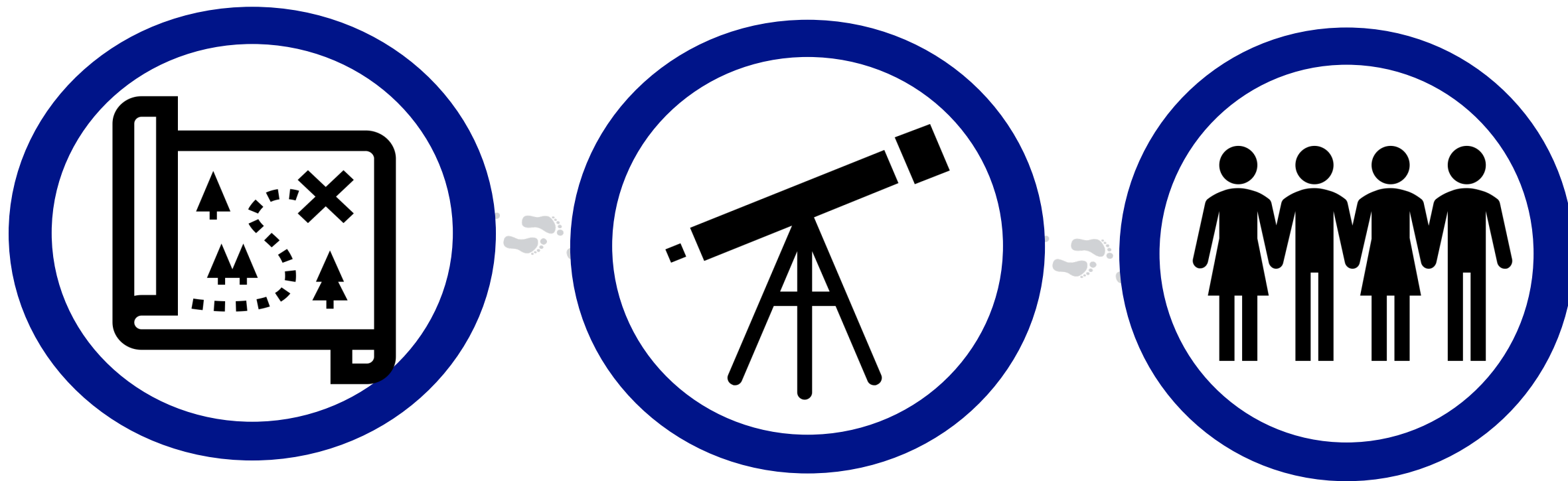


Agenda

1. Scope
2. The landscape scenario
3. Building the Vision
4. Cultural changes
5. Key takeaways



The exciting journey of an evolving Statistical Programming team



This presentation delves into how the organization revamped its people strategies and the cultural changes related, ensuring continued excellence in statistical programming

The landscape scenario

- The pharmaceutical industry has traditionally relied **on the consistent development of skills within specialized roles**
- With **open-source languages and collaborative code development platforms**, there emerges a **potential skills mismatch** between new entrants and the established workforce
- At UCB, we recognized both the **potential challenges** and the **invaluable opportunities** this shift brings

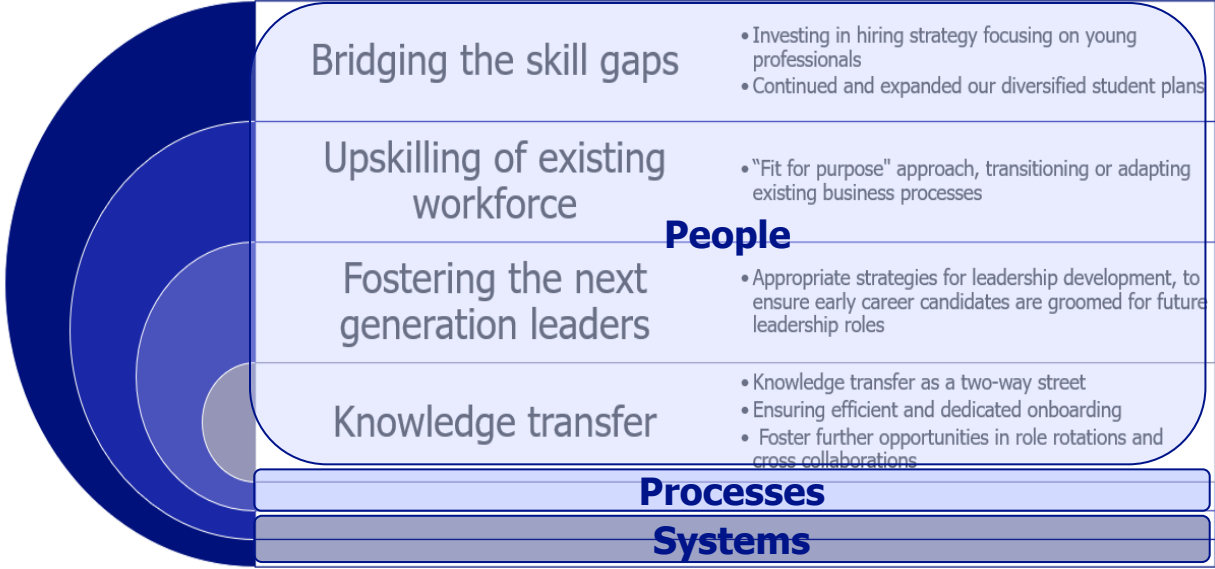




The landscape scenario

- Evolving demands for statistical programming
- Evolving technologies towards **open-source languages** and **collaborative code development** platforms
 - Community Building
 - Skill Development
 - Rapid Evolution
 - Flattened Learning Curve
 - Globalized Learning
 - No one tool fits for all

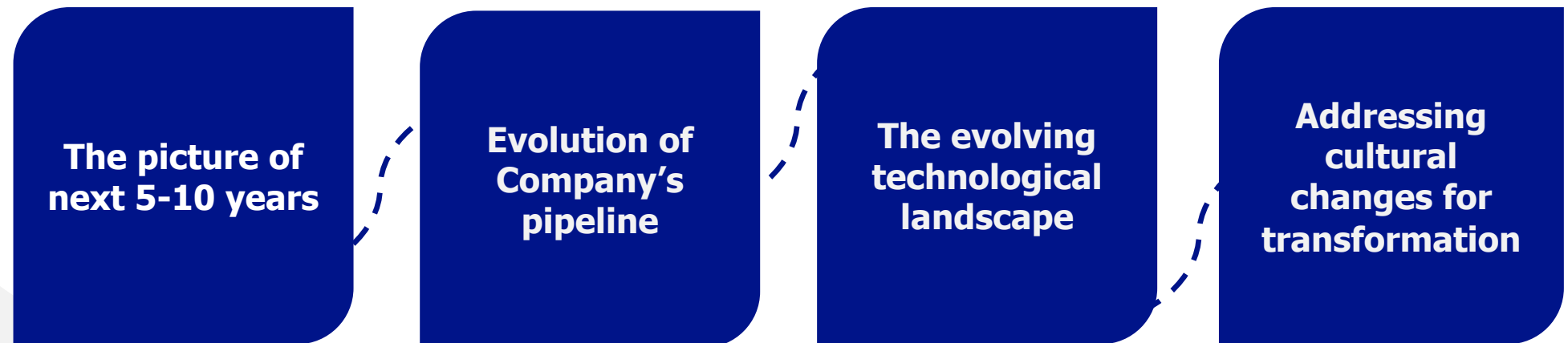
Building the Vision



Building the Vision



- To connect the dots properly and shape our future → creating the **Statistical Programming Vision** and assess the important elements to build it
- Understanding the **strengths**, **opportunities**, and **threats** of the current statistical programming environment



The cultural changes

- The areas of our cultural changes impacting people were
 - **bridging** the skill gaps
 - **upskilling** of existing workforce
 - **fostering** the next generation leaders
 - **knowledge** transfer



Bridging the skill gaps



- Young data science professionals are **inherently familiar with modernized ways of programming**, so we thought one important action was for the company to invest in skills development for next generation programmers
- We pursued an **approach** by refining our hiring strategy to focus on **graduates and young professionals** and secured some **critical senior role**
- In addition, we continued to **expand our diversified student plans**, aimed at embracing a diverse set of skills and talents from early career candidates across several geographies



Upskilling existing workforce



Upskilling the existing workforce in statistical programming was crucial for our organization to keep pace with evolving industry demands in new business areas (data science, visualization, etc.) and to harmonize the skills across different groups

- **Company's business needs** had forced resources to evolve on different programming trends and developing different skills sets across programming groups
- Our upskilling strategy was a **"fit for purpose"**
- Focused on **transitioning or adapting existing business processes** that could quickly benefit from the new technologies and languages



Upskilling existing workforce (II)



- In preparation for these **gradual changes**, **several actions** were required
 - identify the gap between the skills we already had developed
 - prioritize development of new skills
 - curate or create courses
 - identify an internal network of SMEs as change advocates
- To incorporate **new ways of working** → **Agile and Scrum methodology** have been identified as the most appropriate ones
- Evaluated **risks** related to our upskilling strategy
 - resistance to change
 - time constraints
 - financial implications

Several actions
required to set
the upskilling
plan

New ways of
working →
Scrum and
Agile

Risk
assessment



Fostering the next generation leaders

- Regularly invest in **young professionals or students**
- Strengthen and/or expand our external network with **universities and academics departments**
- Looking more broadly to entire **STEM disciplines** (Science, Technology, Engineering, and Mathematics) and **ex-STEM** disciplines to further diversify our skill sets
- **Crafted strategies for leadership development**
 - small, framed projects with short durations (1-2 quarter), get familiar with enterprise and pharma standards and work with Agile methodology.
 - face challenging work but mitigating the stretch by placing them in a collaborative environment where they were also supported

**Regular
students or
young
professional
plans**

**STEM and non-
STEM talents**

**Crafted
strategies for
leadership
development**

Knowledge transfer



- Knowledge transfer is a holistic process.
- **Efficient onboarding** → we envisaged the knowledge transfer as a two-way street – one that leads to mutual growth, innovation, and sustained success.
- **Onboarding as a strategic period to shape newcomer's perspective**
- Identifying and integrating the **missing elements into the existing onboarding process**
 - Further opportunities for more senior programmers, becoming SMEs/POC for onboarding strategy



Key takeaways



Building a vision in statistical programming is a complex but necessary endeavor that requires technological foresight, strategic planning, and cultural alignment

By methodically laying down a vision and assessing the cultural changes needed, organizations can set themselves up for a future where statistical programming significantly contributes to achieving business goals and organizational excellence



The evolving academic and technological environment poses both challenges and opportunities for our programming departments. By adapting recruitment and training strategies, organizations can not only bridge the skills gap, but also harness the full potential of their workforce, ensuring continued success in statistical programming while nurturing the next generation leaders

I would like to express my deepest gratitude to my colleagues **Tim Williams** and **Jonathan Bleier** for their invaluable contribution to shaping our vision and crafting the content of this presentation. Their expertise, insights, and unwavering commitment have been instrumental in bringing our ideas to fruition. The depth and clarity they brought to the table have enhanced the quality of our work manifold. It has been a privilege to collaborate with such dedicated professionals, and I sincerely thank them for their relentless efforts and commitment to excellence.



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Thanks for your attention!

Reach me out for any further question at: alberto.montironi@ucb.com