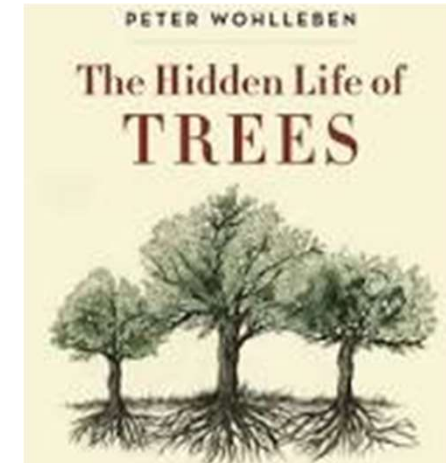


Building Analytics Capabilities

P. Walker

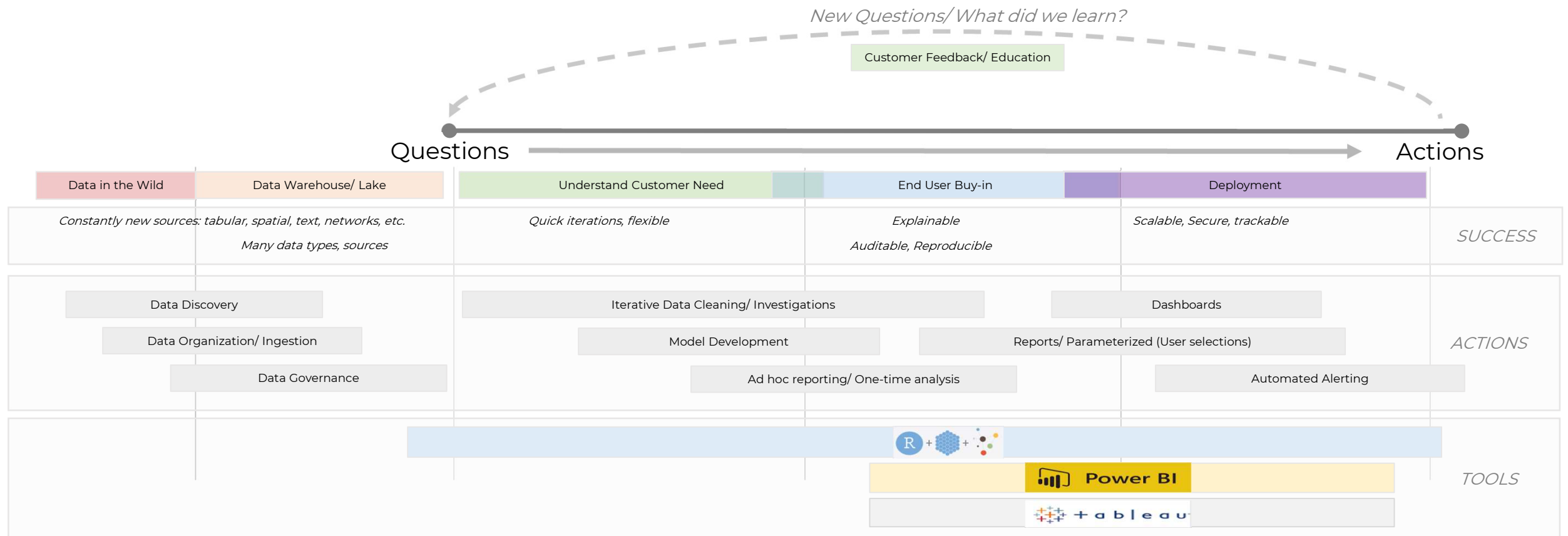
Goal: Deep root system, fostering sustainable growth

- Outcomes: To provide actionable insights to leaders.
- Process: To foster nimble and sustainable growth on pace with the need.
 - New root systems lead to stable analytics throughout the organization which feed each other



Challenge: Remaining robust with change

- Answer leadership questions quickly with confidence while...
 - Disparate and often fractional data: Many different reports already exist
- Avoiding..
 - Vendor lock-in: Leads to analyst lock-in



To be able to partner with leaders, providing analytic solutions to address complex and growing needs, we need to:

1. **Support a data foundation** which continually grows and matures with the organization by gathering, centralizing and governing disparate and varied sources.
2. **Utilize an analytics toolkit** which easily and quickly can (1) ingest multiple data sources at varying degrees of cleanliness, (2) iterate upon analytics models to help customers refine questions, (3) deploy reproducible results to decision makers in an actionable format.
3. **Participate in the process** for capturing lessons learned, historical business knowledge to educate and align future analysts.



External Consultants

Cost	Pro plan = \$10/user/month	\$70/ developer / month \$15/ viewer / month	5 developers, 50 users	
Cost to add new users	10*12*55 (users) = \$6,600 / year		+ staging server	
Yearly Costs	The Premium plan starts at \$4,995 a month per dedicated cloud compute and storage resource.	100 viewer minimum (70*12*5(developers) + (15*12*100(users))) = \$22,200/year + server/set up costs	\$32,901 / per year	
Developer Interaction Experience	GUI + embedded formulas	GUI + embedded formulas	code for development/ IDE	
Programming languages available	Some other language bindings, but mostly using Power BI specific syntax	Some other language bindings, but mostly using Tableau specific syntax	R, python, stan, c++, html, etc.	
Data Cleaning Capabilities What data is accepted (data ingestion)	Largely dependent on ~clean/ rectangular data being imported	Largely dependent on ~clean/ rectangular data being imported	Accepts data from many different sources	Could lack visibility
Reusable, Reproducible, Auditable analysis pipeline				
• Connections to version control				
Dashboards	Within the MS ecosystem, allowing for movement from excel to Power BI	Purpose of the application	Few different packages provide solutions: Rmarkdown/ parameterized reports, Shiny, flexdashboard, Distill, and many other integrate with RStudio Connect	
• Integrates with single sign-in				
• Easily auditable (calculated cells vs function)				
• Easy branding				
• Can ingest/ gather data from user input				
• Development Time				
• Exportable results				
• Accessible in different mediums (phone, tablet, browser)				
Add-ons from Base	Some need to be paid for	Add-ons cost per user/ month	Open source development, CRAN	
Analytics Capabilities	Can import some analytics results in to visualize later	Can import some analytics results in to visualize later	<ul style="list-style-type: none"> Spatial analytics capabilities (i.e. drive time, using shapefiles) Simulation tools/ MCMC, Optimization/ solvers Text mining/ text cleaning Process miner Forecasting, Modelling Network Analysis 	
Other Capabilities	Can be easily integrated into the rest of the MS Office ecosystem	Has a data governance add-on	Supports integration into MS ecosystem.	
• Supports building APIs				
• Can send emails/ scheduled? Rule based?				
• Testing for data quality as part of process				
Community of Practitioners	Power BI specific	Tableau specific	Transferability of skillset/ hiring potential Likely finding advanced users that can bring stronger analytic insights	