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# The Tableau Drive Manual

## A Practical Roadmap For Scaling Your Analytic Culture

Drive is an enterprise deployment methodology for self-service analytics. This Tableau Drive manual is a practical road map for scaling analytics culture using Tableau as a transformational vehicle.

Tableau Drive was born from experience. Although Tableau has excellent self- service capabilities, we saw that some customers were more successful than others at driving a culture of analytics widely throughout their organization.

We observed that success with Tableau varies widely depending on the implementation approach and the organization’s readiness to change. Intrigued, we studied the implementations of those organizations most successful in building an analytics culture, examining how they handled implementations.

We then documented the most effective, repeatable techniques we encountered here.

For some organizations, the framework laid out in this Driver’s manual will be enough to move forward. However, you may find that guidance from a seasoned expert can get you to your final destination more quickly and efficiently. Tableau partners or Tableau’s Professional Services team are available to offer navigational assistance.

Introduction..... 2

Drive Teams ..... 6

The Four Phases of Drive..... 8

Phase I: Discovery ..... 9

Phase II: Prototyping and Quick-wins ..... 11

Phase III: Foundation Building..... 15

Phase IV: Scale Out..... 23

Conclusion..... 25

Glossary ..... 26

Resources..... 27

Feedback..... 28

## Supporting the Cycle of Visual Analysis

Before going too much further, let's understand clearly that, at its core, Tableau Drive is about enabling individual or team-based visual analysis.

Visual analysis is an iterative and non-linear cycle of data acquisition, analysis, hypothesis building and re-examination. It cannot be cut short or solved simply with better algorithms.

The Tableau version of this process is called the Cycle of Visual Analysis. Since day one, we've honed our software to make this process faster and easier.

You might have noticed that we just said "process." And when software people say "process," the word "Agile" probably won't be far behind.

### **What is Agile?**

Agile is a collection of development principles proposed in the 1990s. It is a more flexible alternative to the waterfall development methodology, which doesn't adequately address the rapidly-changing requirements in projects such as Business Intelligence.

The guiding principles of Agile methods are:

- People over processes and tools
- Working software over comprehensive documentation
- Collaboration over requirements gathering
- Responding to change over following a plan

In an Agile process, there is almost no benefit to exhaustively documenting requirements. Requirements are much more flexible and changing them costs hours or days—not months.

This allows more feedback to come into the process earlier, delivering greater efficiency and effectiveness throughout the life of the project.

The Cycle of Visual Analysis is itself an Agile process. In fact, some say that Agile is more suitable to analytics than it is to writing software.

However, the Cycle of Visual Analysis augments Agile methods by suggesting a new division of labor between IT and business. Business users themselves are the developers; they control creative execution.

In a typical waterfall development model, the business is involved only for the requirements-gathering phase. Agile methods suggest an iterative process.

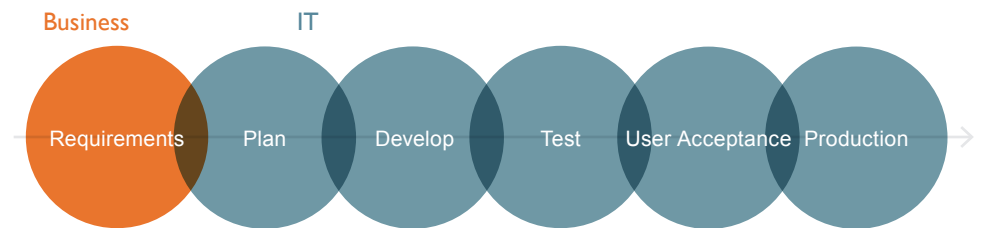


Figure 1: Traditional Waterfall Method

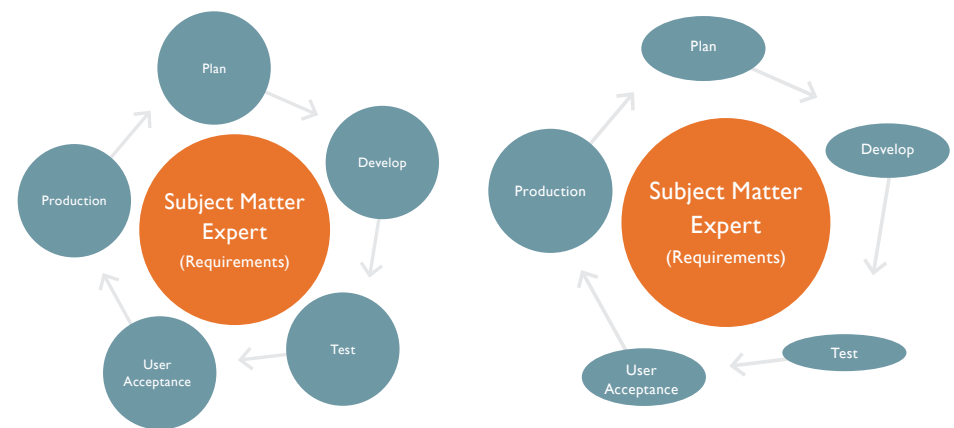


Figure 2: Traditional Agile Method

Figure 3: Improving Agile

### Improving Agile

With self-service technology, this model improves further. When people can work with their data directly and visually, gathering requirements, planning, development, and user-acceptance is much faster.

With practice, business users can perform these activities in real time, at the speed of thought. This not only makes report-writing faster and more rewarding, but also enables a multi-person, collaborative analysis.

## Roles and Responsibilities - IT and Business Users

Part of the Drive methodology focuses on creating an improved partnership between business and IT. Drive cannot succeed without full support from both IT and business leadership.

Although responsibilities are shared, each team has primary responsibility for certain aspects of the deployment.

### **Center of Operations (IT)**

- Security
- Data architecture
- Scalability
- Training
- Center of Operations
- Enablement of intranet
- Tableau Server deployment, configuration, and maintenance
- Tableau Desktop provisioning

### **Center of Evangelism (Business Users)**

- Developing and promoting best practices
- Training and support
- Promoting analysis development and a culture of analytics
- Identifying & prioritizing new data sources

Tableau Drive promotes shifting ownership of creative analytic work from IT to the business teams that work with the data regularly. IT may continue to develop specialized workbooks for special circumstances ( a CEO KPI dashboard, for example), but people in business units will be enabled and expected to do their own analysis.

## Drive Teams

The best work typically happens in small teams. Performing real-time analysis within cross-functional teams is one of the most efficient, effective, and culturally transformational things an organization can do.

On any Drive team, you need people who can fill certain roles. Some people may fill two or more roles, but it is important to keep in mind that the cycle breaks down when any roles are missing.

### The Drive Team

**Executive Sponsor:** The Executive Sponsor sets the strategic direction of the project and aligns with corporate direction or initiatives. This person (or people) should be a senior member of staff with a relevant area of responsibility that will be affected by the outcome of the project. The Executive Sponsor is involved from the start of the project, including defining the project in conjunction with the Project Manager. Once the project has been launched, the Executive Sponsor should ensure that the project is actively reviewed as it evolves.

**Project Manager (PM):** The PM is responsible for developing, in conjunction with the Executive Sponsor, a definition of the project. The PM then ensures that the project is delivered on time and within budget. PMs manage relationships with a wide range of groups, including consultants. The PM monitors efficient resource allocation, effective resource use, and maintains a cooperative, motivated, and successful team.

**Tableau Champion:** The Tableau Champion has a vision of how Tableau can help them achieve their business goals using analytics. The Tableau Champion is deeply familiar with the questions the analyses are designed to answer and can explain the impact of acting on data insights. This person is involved from the start of the project—including defining the project deliverable—along with the Project Manager. Often the Champion has been prototyping analysis and using results from those early projects to push the larger project forward. Once launch occurs, this person's time is often dedicated to the project.

**Tableau Administrator:** The Tableau Administrator is responsible for the server running Tableau—installing, configuring, upgrading, monitoring, maintaining, and overseeing security. He or she will also provision, publish and manage the Tableau data sources to ensure alignment with the data governance policy of the entire organization. Depending on the security topography, a Tableau Site Administrator and/or Tableau Project Lead may be designated to split the workload.

**Tableau Author:** The Tableau Author will develop and publish dashboards to the development (or staging) environment. This person—or ideally, a group of people—will have enough experience with Tableau that they can actually build and rework visualizations in real time. Authors will also be a resource for others ramping up their Tableau skills.

**Tableau Consumer:** The Tableau Consumer will be the ultimate visual analyst. Working with reports published on Tableau Server, he or she will ask and answer questions in the course of normal business.

**Database Administrator (DBA):** The DBA is an IT professional responsible for installing, configuring, upgrading, administering, monitoring, maintaining, and overseeing security of databases in an organization. The Drive team will call on the DBA for appropriate database drivers, logins, and access to the data set. In certain situations, the DBA will model or structure the database in a manner that enables optimized integration with Tableau.

**Data Steward:** The Data Steward is responsible for maintaining data elements in the Data Dictionary or metadata registry. The Data Steward's role is a broad one. It incorporates process definitions, policies, guidelines, and responsibilities for administering the organization's entire data in compliance with business and/or regulatory obligations. The Data Steward must have an understanding of the business domain and the interaction of business processes with the data. A Data Steward ensures that there are documented procedures and guidelines for data access and use, and may work with the database administrator to plan and execute an enterprise-wide data governance, control and compliance policy.

## Extended Drive Team

An organization may choose to work with a Tableau partner or Tableau's Professional Services team to execute Drive. In that case, these additional resources will become part of the extended Drive Team.

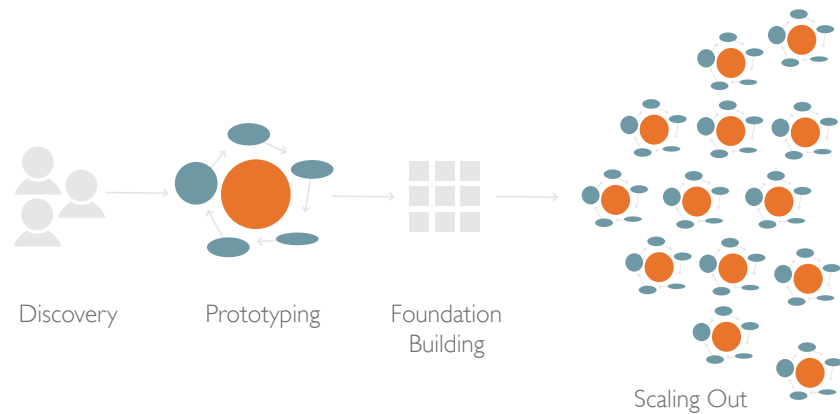
**Tableau Project Manager:** The Tableau Project Manager is responsible for the external team. This person monitors the project deliverables, both from a client and a Tableau perspective to verify progress and identify any issues that may arise. He or she coordinates Consultant requirements to make the most efficient, cost-effective use of resources.

During scoping, it may be determined that the Tableau Project Manager will also manage the entire Drive project, from both a Tableau and a client perspective.

**Consultant:** The Consultant is a highly skilled Tableau expert. He or she will work in partnership with the client, guiding them towards an analytics-driven culture. This person will lead the Drive effort and conduct all of the on-site workshops, drawing on best practices from successful implementations.

## The Four Phases of Drive

After covering these foundational concepts, we are ready to discuss the four phases of the Drive methodology itself: Discovery, Prototyping & Quick-wins, Foundation Building, and Scaling Out.



- I. **Discovery:** An exercise that evaluates a company’s readiness to promote an analytics culture and forms a plan to close the gaps.
- II. **Prototyping & Quick-wins:** A period in which power users get the support and training needed to become confident analytic champions. This phase is about developing “quick wins” that prove the value of business-led analytics—and that can be copied and expanded over time.
- III. **Foundation Building:** Putting in place the processes, organizational structures, and technical infrastructure to support broad adoption. This is typically where security, data governance, and other policies become mature and where broad training and enablement is put in place.
- IV. **Scale Out:** Measured roll out of empowered analytics capabilities to the enterprise.



## Phase I: Discovery

The first stage in Drive is a classic discovery and qualification process.

The first question is simply: “Can we be successful?”

Assuming the answer is “yes,” the next question is: “What is the road map to achieve that success?” Just like embarking on a road trip, you’ll want to review all of the critical elements to make sure you will arrive safely at your destination.

## As-Is Assessment

All too often we focus the current state only on the current reports, but people, strategy, and processes are equally important in driving change.

In order to arrive at a destination, you need to know your starting point. Institutional memory—a collective understanding of past activities, experiences, and knowledge shared across the group—is precious. And it can be scarce.

It is quite common that a consultant will arrive on-site and have to conduct extensive interviews just to determine the history and current state of organization, current or historical strategies, software, and hardware environment. Clear documentation allows new team members and troubleshooters to begin contributing much sooner. It also makes it easier to reference a “future state” vision.

## As-Is Assessment Checklist Continued

### People

- Organizational chart
- IT / business analytics roles and responsibilities

#### *Skills assessment:*

- Tableau capabilities
- Data visualization best practices
- Data source expertise
- Business domain expertise

### Strategy

- Past and current executive sponsor priorities and concerns
- Business intelligence usage, history, concerns
- Related and complementary initiatives

### Technology

#### *Tableau and database environments:*

- Hardware and software
- Machine names and IPs
- Firewall, proxy, and network boundaries

#### *Current state technical architecture:*

- Data warehouse
- Extraction, Transformation and Load (ETL) Tools
- Data quality
- Data enrichment
- Metadata management

#### *Data:*

- Entity-relationship diagrams
- Table and field descriptions including data dictionary and lineage
- "Meta models" from other business intelligence tools

#### *Reports:*

- Current reports and dashboards
- Refresh frequency
- Distribution lists

### Process

- Current lifecycle management
- Training modes and preferences
- Current "Center of Excellence" model

#### *Data governance:*

- Current group-, role-, or user-level security rules
- Current process and approach for managing data quality
- Storage of current, historical, summary and transactional data

## Future State Vision

The future state vision outlines the desired state at the end of the journey and at key milestones along the way.

This holistic plan describes the vision around people, strategy, technology, and process. While the specifics will be unique in each organization, thematically the most successful organizations focus their vision around building a pervasive analytics culture underpinned by business empowerment and self-reliance. The vision balances empowerment and flexibility with data governance and quality. In the Foundation and Scaling phases, we will explore techniques to help make that vision a reality.

## Phase II: Prototyping and Quick Wins

As we looked at the most successful deployments of Tableau, they had one common theme: A passionate user community that could realize value quickly by implementing Tableau even against an imperfect data set. The Tableau Champion is typically drawn from this set of early users, and the Executive Sponsor has become engaged by seeing the results from the Prototyping phase.

## Prototyping Candidate Projects

At the outset, identify those power users who are likely to want to participate and the business units with the greatest need for analytic clarity. Existing Tableau users are prime candidates, but others who are technically capable and open minded should also be considered. In some organizations there might be multiple candidate projects to choose from. In others, there may be only a single candidate project opportunity. If there is no obvious candidate project, your organization may not be ready to begin the journey.

## Defining Project Success

With more traditional BI implementations, project success is typically defined by a singular deployment milestone. When the objective is to empower a culture of data-informed decision making, there isn't necessarily a traditional "go-live" milestone. Success is achieved when people can find valuable insights and then share those findings beautifully and convincingly.

Sometimes, the output from this phase is a set of reports that, in the past, we would have considered “complete” or “done.”

In dynamic organizations with analytics cultures, the end is always another beginning from which actions and new questions may be based.

The Prototyping phase should focus on using Tableau as designed rather than replicating a dashboard or report created with other tools. Let the journey of discovery be the guiding principal for this phase. Take a time-boxed approach measured in days and weeks, not months. Don't let the quest for perfect data slow you down. At its core, this phase focuses on the two foundational elements discussed at the beginning of this whitepaper—the Cycle of Visual Analysis and the Drive Team.

## Drive Sprint

Paying homage to Agile methodologies, we call the process of working collaboratively through problems a Drive Sprint.

During a Drive Sprint, the Drive Team will meet face-to-face to create a set of reports, analytics and/or dashboards in short order.

Each Team member should:

- Have Tableau Desktop installed
- Have watched many of the free training videos on the Tableau website
- Bring a burning business question
- Be ready to work with whatever data is readily available
- Give feedback to IT on data cleansing and data preparation needs.

Principles of Drive Sprints to keep in mind:

**Work in Real Time:** Tackle those initial burning business questions with Tableau in real time and change approaches if your initial attempt stalls. Create placeholders where data is missing and take notes on the workbooks themselves for follow-up.

**Gather Face-to-Face:** A Drive Team works faster and more efficiently when face-to-face. During meetings, prioritize modifying and creating content rather than taking actions to do later. Collaborating over a web conferencing system is nearly as good. Avoid working in isolation, except to resolve technical challenges.

**Seek Clarity:** Is the current business question clear? Does the analysis effectively answer it? Do the drill-down views reach the root cause of the problem? Is more data necessary to answer the question? Don't get carried away with the visualizations; make sure that you're providing useful answers to important questions. If you're coming up short, clearly annotate your dashboard to inform future efforts.

**Meet Frequently:** A weekly cadence of producing new reports, revising reports, and iterating on the data architecture has proven sustainable. Some teams meet more frequently, in-person or virtually.

**Leverage Interactivity:** The goal of static reports was often to put as much information on the page as possible. This leads to poor visual design, a low information communication rate, and serious performance optimization problems. Instead, put the most essential items on a page and let the rest come through in drill-down and interactive exploration. Create separate reports to answer different questions. Use Tableau's Story Points capability— added in Tableau version 8.2—to guide analysis. Follow best practices for information design to help people understand more about the data.

## Expert Assistance

It is important to have one experienced and knowledgeable Tableau expert available to help launch and sustain the initiative—either on staff or in a consulting capacity.

Even if novice users are able to 'power through' problems, they will not know when it is prudent to change gears or to give up on a dead-end approach. Moreover, the uncertainty and second-guessing that will occur without proper oversight will hurt project momentum and executive confidence. Experience matters.

## Work With the Data You Have

In the early stages, business user champions may have their own spreadsheets and “unofficial” data sources. Start analyzing right away with the data that exists. Waiting for “certified” data sources will only hinder the project's momentum.

Sometimes the data is large and unwieldy. In that case, Tableau provides a file-based, proprietary “fast data engine” database that is fully provisioned by simply creating an “extract.” Simply extracting and summarizing data in this way may make a large dataset useful for real-time analysis. After creating a rough workbook, be sure to consider summarizing extracts and hiding unused fields in order to improve query performance.

## Wrangle Data Properly

Sometimes the source data is not in a star schema or the clean tabular format that Tableau needs. The challenge of pivoting cross-tabs, combining disparate data, cleansing “bad” data, imputing null values, and such affect Excel users and data warehouse builders alike.

Tableau has several KB articles on data preparation and offers a free data pivoting utility for Excel.

Fortunately, a new class of personal ETL tools is making complex data wrangling easier than ever. Vendors offering desktop or web-based tools include: Alteryx, CloverETL, Lavastorm, Informatica, Paxata, Rapid Insight, SnapLogic, Syncsort, and Talend.

Check out the Tableau forums to find out what tools other customers are using.

## Deliver Reports Immediately

In this phase, understand and accept that the first series of reports may eventually be thrown away. That’s actually great news—understanding this fact stops ‘analysis paralysis in its tracks! And adjusting your first attempts is much easier than you might expect. For example, you can swap data sources and rework workbooks using Tableau’s data source replacement functionality.

Be sure to leverage and learn from workbooks pre-dating the Drive initiative. What worked? What didn’t work? What questions were not fully explored? Deliver v0.6 immediately; v1.0 will come later.

## Prototyping and Quick Wins

This is an important phase that allows your organization to build analytical muscle while simultaneously delivering analytical value. You will sacrifice some of the process and governance niceties in this quick win phase but don’t fret. They will come back in the Foundation Building and Scale Out phases, coming next.

Working through data and formatting challenges requires an ambitious start and quick wins are important for building excitement and momentum.

## Prototyping Milestone Checklist

- Have you produced reports for one or more business units that are widely considered compelling and useful?
- Is there a sense that the work you have done is adding value and can be replicated?
- Have you identified initial Drive Teams in the organization?
- Is there a shared sense of excitement about visual analysis?
- Are rumors spreading about the amazing work your team is doing?

If the answer to these questions is 'yes', you're likely ready to lay down the enablement bricks which will be the foundation for scaling out.

## Phase III: Foundation Building

During the Foundation Building phase, we will build the organizational and process muscle to enable and prepare for scaling out agility without sacrificing data quality and governance. Many of these techniques will be tested during the Prototyping phase, but now it is time to secure the foundation.

## Center of Operations

The heart of the Tableau deployment will be a Center of Operations within the IT organization. During the Foundation Building stage, the Center of Operations will be responsible for setting up Tableau servers as well as the intranet applications. The Center of Operations will also create and document data sources and establish the architecture to enable the next phase, the Scale Out.

To start, the Center of Operations will set up two projects or sites on the first Tableau server. A "project" in Tableau is a collection of related workbooks. A "site" is an entry point for different organizations or groups on a single server which gives the appearance of having separate servers.

One will be the sandbox or playground. The sandbox environment was likely setup during the Prototyping phase. The other project/site will be the "certified" or production environment.

Publishing rights to the "certified" environment will be locked down. Most people will publish reports to the sandbox and IT or a Tableau content steward will promote them to production.

There are trade-offs to using sites versus projects. If using projects only, search results within a site may include content across projects, which may cause confusion. Sites provide content isolation at the cost of a separate publishing step. To move content from one site to another, you would need to import and republish from the desktop client, use command-line scripting, or leverage a third-party tool like Interworks Enterprise Deployment for Tableau.

Most larger organizations prefer this two-site approach for quality assurance and validation. People can begin creating reports in the sandbox immediately—before you’ve finalized “official” data and data sources. If the reports are satisfactory, they can be promoted to the certified project.

If you anticipate external user communities, we firmly recommend setting up separate sites for internal and external use. Although users may have access to multiple sites, artifacts are not shared between them. This makes it much less likely that internal content would be shared accidentally with external audiences.

## Data Sources

Configuring and documenting shared Tableau data sources is a critical step for success with Drive. Tableau data sources are conceptually similar to Business Objects Universes or Cognos Framework Manager models.

Although data sources are created in the authoring tool, Tableau Desktop, they can be published to Tableau Server separately and shared by multiple workbooks.

When users are connecting to published data sources from Desktop or Server, credentials may be embedded in the data source, or users may be prompted for credentials. These individual credentials can be stored for future use or the user can be prompted every time they access the database.

When building data sources it is important to understand and implement best practices. Keep these principles in mind:

**Simplicity:** Use the most straightforward and direct data structure possible. Resist adding complexity. Err on the side of using many simple models instead of one enormous semantic layer.

**Security:** Configure data source filters to implement group, role, and user specific security. Analytic self-service does not imply giving all data to all people. Only you know the right level of data access for your organization.



**Speed & Governance:** Users expect results quickly. If you anticipate long-running queries, consider creating well-indexed summary tables or offloading processing to the Tableau Data Engine.

**Flexibility:** Pay attention to analysis that business users are doing. Their work will inform you about how to configure data sources. Welcome new requirements; they represent an opportunity for deeper understanding and a chance to address unsolved problems.

**Data Quality:** It should be obvious from initial queries whether data quality is sufficient for widespread consumption. Be mindful of null fields, unmatched rows (in the case of non-star schemas), duplicates, and non-conformed dimensions.

**End-user Data Dictionary:** After creating data sources, write a short document that will help future users understand where the data came from, what information particular data fields contain, and how they might start using them. One or more simple sample reports can be helpful. Leveraging in-model tool-tips are particularly useful.

## Effective Use of Extracts

For many organizations, “extracts” served by the Tableau Data Engine will be the primary analytics database. Extracts require no indexing or DBA resources.

In large customers like eBay, new data requirements are satisfied using extracts first. After 90 days, if the extract is still heavily used, DBAs consider recreating an indexed or materialized view in the primary database. Sometimes summary data is served from extracts while row-level detail remains in the data warehouse.

Keep in mind that size does affect extract query performance. As with other columnar databases, querying large numbers of columns at once will impact performance. Extracts are file-based and not limited by main-memory capacity. They were designed to support 1 billion row datasets but you will see performance degradation at that size. If your data comprises more than several hundred million rows, you may want to consider summarization strategies.

## Office Hours

During the Prototyping Quick Wins stage, we were building business unit champions and helping them find critical insights. During the Foundation Building stage, we are expanding that community to a broader group of business unit champions.

One proven technique for collaborative capacity building is to set up regular office hours. For example, at regularly scheduled times, a Tableau expert could be available to train and assist with workbook creation in a conference room. Office hours can also be implemented virtually using personal video conferencing.

The server should already be set up so that workbooks can be published quickly and shared with business unit leadership and executive sponsors.

The practice of keeping office hours itself is a prototype for the kinds of technical-business collaborations that will be scaled out. While office hours may be a technique used during the Prototyping Quick Win phase, it is a foundational best practice to growing and scaling out capabilities.

## Best Practices, Templates and Style Guides

Tableau is a free-form environment that invites user creativity. Creativity flows more freely when compelling examples and clear guidelines are provided. It is no surprise that tidiness and appearance inspire confidence—not just in managers and executives, but in everyone.

Consider these best practices for building the clearest, most compelling analyses:

**Simplicity:** Put the most essential data elements on the initial page and provide additional details via a drill-down. Use titles, axes and tooltips to help explain the data. Do not build monolithic dashboards. Guide users through multiple click-paths with thoughtful contextual cues and logical drill-downs. This strategy not only generates much better performance but also makes the analysis more usable.

**Perfect is never perfect:** Preferences and aesthetics change over time. Create a high-quality sample but do not over-deliberate. Think, but don't become paralyzed.

**Beauty:** By copying and pasting nice looking worksheets into a template workbook, inexperienced end-users should be on their way to creating beautiful work. Give them a leg up!

**Teamwork:** The most durable model is one that is appreciated widely. You may want to create several template “looks” and vote on which will be the final one.

## Best Practices for Building Templates

Work with Tableau experts and your marketing team to create compelling and functional workbooks that will be used as templates for subsequent work.

Consider including:

- Jump page (Title Page) with navigation links
- Two or more dashboards with 3-4 views per dashboard
- Built-in instructions for the user through your titles and subtitles
- Icon library saved in “My Shapes” that includes common buttons like Help, Home, Back, Forward, etc.
- Use of Help and Home buttons (separate sheets with shapes) with instructional tool-tips
- Drill through links to other pages
- An attractive, branded look and feel

## Center Of Evangelism

While the Center of Operations will build the IT infrastructure for success, the Center of Evangelism will build the human infrastructure for success.

The Center of Evangelism may start as an individual effort, but will grow to include key stakeholders both from IT and the business units.

Take time during Foundation Building to develop and test creative ideas to engage people from your business units. Also prepare Tableau champions for the expectation that they will be spending more time helping others ramp up their skills.

## Enablement Platform

While early champions continue to work on report development, IT should finalize the resources that business users will need to work effectively and comfortably with the new technology.

These materials should be made available on the corporate intranet. A good first step is to setup an internal email distribution list for personal support and troubleshooting. This would be supported by Center of Evangelism staff and/or outside consultants.

## Recommended Resources in the Center of Evangelism

- Resource directory
- Data platform
- Data Server data sources documentation
- Data dictionary documentation
- The onboarding process for getting users up and running on Tableau
- Training collateral and calendar
- Personal data source promotion to centralized data assets
- Prototype workbooks with narratives around usage and effectiveness
- Well-documented templates and style guides
- Analysis discussion forums
- Internal data analysis blog
- How-to documents or videos:
  - Procuring a Tableau license
  - Finding Tableau enablement and training materials
  - Publishing to the “playground” environment
  - Requesting workbook promotion to the “certified” environment
  - Starting a new report using the style guide as a template
  - Common formatting and layout techniques
  - Tips and tricks from internal users

## Ramp up Center of Evangelism

During this phase the Center of Evangelism will launch a variety of programs to celebrate the work of Drive Team members. Many of these techniques are piloted in the Prototyping Quick-wins phase.

The importance of recognizing the activity and achievements of the Drive Team cannot be over-emphasized.

**Internal Show-and-Tell:** The best content comes from sharing—and from the feedback on shared work.

**Competition:** Recognition, no matter how small, is motivating. Give out prizes for simplicity, for guided analytics, for creativity, and even for obscure insight.

**Games:** Make analysis fun by turning it into a treasure hunt for insight. Draw in new people who may complement or replace those currently on the Drive Team.

**Tableau Days:** Try to schedule a “Tableau Day” every month. Use it as an opportunity to introduce new features in the software or your program. Invite speakers from inside the company as well as from Tableau.

**External Stimulus:** Participate in Tableau User Groups in your area, act as a reference for another organization, submit answers in forums, participate in Tableau case studies or present at a Tableau conference.

## Foundation Building Milestone Checklist

The systems you set up during the Foundation Building phase need to be assessed. The Organizational Readiness Plan must be rock-solid and usable before launching the Scale Out phase.

During this phase, you are launching a collection of services that will make business users feel comfortable with new technology. The perceived risk will be inverse to the breadth and depth of the foundation.

## Foundation Building Milestone Checklist

- Roles and responsibilities are clearly defined for Center of Evangelism, Center of Operations, and Drive Team
- The task of maintaining and updating the intranet wiki, training calendar, and all other documentation/resources has been assigned
- The person responsible for staffing the internal troubleshooting email account has been identified and a process for escalating issues is described
- Process for collecting, reviewing, and implementing suggestions for improvement is identified
- Enablement resources have been evangelized to the user community, either through your company intranet or an email distribution list
- Clearly-defined end-user and IT workflows for promoting content from the playground to certified environment exist
- Steps for measuring/monitoring resource usage have been determined
- Process for governing data quality and data definitions has been decided
- Users understand how to get their content promoted to the certified location for company-wide visibility?
- An IT person evaluates the new user login process for the project intranet. A representative from the business unit should try logging into the project intranet as a new user while the IT person watches. Is the experience smooth? Are questions answered?
- Recreate this experience with a “test” user. Sit with them while they attempt to login. Ask them to watch some introductory training videos and then help build a report using the style guide. See how long it takes before they become discouraged or get stuck. Email the support alias you have setup—see who replies and how long it takes.

## Phase IV: Scale Out

Once you get the processes and organizational structure in place, it is time to start rolling out to a broader community. With the right processes and organizational community support, you have paved the way for broader adoption. Scale Out is the “main event” —the time when all of that preparation and planning pays off.

During Prototyping, Quick Wins and Foundation Building, we have built the framework for a successful Scale Out. The time spent on building and maintaining this framework is vital your success.

Ordinary users can be easily discouraged, may fear the idea of a new tool, or could become impatient for results. By putting the effort into providing a robust framework, you have prepared for the worst while hoping for the best.

Your Scale Out strategy will continually improve if you take the right steps. Gather benchmarks and measure adoption. Evaluate what worked with the first business unit and fix problems before moving on to another.

### Business Unit Kick-off Meetings

We do not advise scaling out across the organization all at once. Instead, identify business units with the most enthusiastic Tableau champions and strongest prototypes—and start there. Some organizations take a business-initiated approach: different business units opt into the program as projects surface that require analytics.

Hold a kickoff meeting to introduce your Tableau champions and present the intranet resources built up in the Foundation Building phase.

Start with a “Wow!” demo created during Quick Wins. Let the author of that demo discuss the need, inspiration and process for creating the workbook. Talk about how that workbook is used today and the impact it is having on the business.

Take the time to articulate the company’s vision for democratizing visual analysis. Discuss the history of BI in your organization and the huge investment IT has made to allow self-service.

Talk about the benefits of self-service from a personal as well as corporate perspective. Be inclusive of all who can contribute to analysis. Set high expectations for broad-based participation, teamwork, and opportunities for individual recognition.

Before wrapping up the kickoff meeting we suggest including a one-hour, hands-on-the-keyboard, follow-along training. This training should use company data. While somebody leads the training; stronger Tableau users should circulate and help the beginners. Wrap up by announcing formal training options and a calendar that includes Drive Team activities.

Business users should leave the kickoff meeting with confidence and a desire to address their own business challenges with the Drive methodology.

### Scale Out Milestone Checklist

- Did you select business units who are willing and logistically able to do their own self-service analysis?
- Do key business unit stake-holders see the value of improving their analytics culture?
- Have you created qualitative and quantitative metrics for measuring the success of the scale-out effort?
- Are stake-holders comfortable with the mission statement and committed to a shared goal?
- Do you have a good feel for when other business units will be ready to scale out?
- Are users comfortable with the level of support they are getting from the Center of Operations and Center of Evangelism?



## Conclusion

Drive is a top-down and bottom-up deployment methodology that draws on Agile methods and defines a new partnership between IT and the business. In business intelligence, self-service is often framed as self-adoption. That is far from the truth. To achieve wide adoption, an organization needs both highly-engaged people on the business side and programmatic support from the IT side.

## Phases of Drive

- I. **Discovery:** A qualification exercise to ascertain whether sufficient technical, business, and political resources can be marshaled. The number one reason initiatives fail is because important people aren't enthusiastically onboard.
- II. **Prototyping Quick Wins:** A period during which power users get the support and training they need to become confident analytic champions. During this time, focus on developing "quick wins" that prove the value of business-led analytics and can be copied and expanded over time.
- III. **Foundation Building:** The phase in which you will put into place the processes, organizational structures, and technical infrastructure to support broad adoption.
- IV. **Scale Out:** Measured roll-out to the enterprise of empowered analytics capability.

Drive is a never-ending journey. There will always be more problems to analyze, more employees to teach, and more subject areas to master.

As you progress through your journey, you will most certainly strengthen your analytical culture and make a healthier, more engaging workplace for all.

## Glossary

**Agile:** A software development philosophy characterized by shorter development cycles, cross-functional teams, continuous testing, and frequent, shippable builds.

**Analytics Culture:** Practices, programs, and capabilities that encourage and empower smart people to think critically, work collaboratively, understand the business, and make informed decisions.

**Business Users:** Non-IT personnel who seek insight from their data.

**Center of Evangelism:** A working group of enthusiasts who provide encouragement, quality assurance, and support for software usage and adoption.

**Center of Operations:** An IT working group that sets up, maintains, and documents Tableau servers and data sources.

**Cycle of Visual Analysis:** An iterative analytics development process that describes Tableau workbook development. The cycle includes: identify task, get data, find structure, view data, develop insight, and act/share.

**Drive Sprint:** A continuous Drive Team development session; adapted from Agile time-boxed development periods.

**Drive Team:** A collection of people representing three competencies—data, Tableau skills, and business—who comfortably work together in real time. Drive Teams are adapted from Agile cross-functional teams.

**Experimenting:** Completely ad hoc workbook development.

**Office Hours:** Recurring, on-premise or remote analysis facilitation by a highly-experienced Tableau user.

**Prototyping:** High-quality visual analysis work performed by subject matter experts and Tableau evangelists with guidance from experienced Tableau users.

**Stakeholders:** People that sponsor, develop, or are impacted by self-service reporting.

**Subject Matter Expert:** Specialist within a particular area of business.

**Tableau Drive:** Drive is an enterprise deployment methodology for self-service analytics that enables and encourages non-technical users to fully participate in an analytics culture.

**Waterfall:** A sequential software development process used for highly complex systems with static requirements and clear roles separation.

## Resources: The Journey toward Mastery

Some users pick up Tableau for the first time with substantial academic and practical experience in data analysis and infographics development. Others start completely from scratch.

Regardless of where people start, we find that people who reach the highest levels of proficiency have attained mastery of the following three disciplines:

- Tool usage: How to use Tableau
- Data literacy: General numeracy and knowledge of databases, SQL, and statistics.
- Visualization know-how: Understanding the art of communicating visual information effectively

Within each discipline—and across them—there are communities, courses, and many other exciting learning opportunities. The pathway toward excellence in one or all of these areas is extremely rewarding. Best of all, journey toward this knowledge can be completely free.

### **Online Tableau Training**

Tableau would not be a fast-growing software company without the incredibly high quality training offered for free on its website. The “core” curriculum includes over 10 hours of wisdom served up in bite-sized, 3-30 minute servings.

[tableausoftware.com/learn/training](https://tableausoftware.com/learn/training)

Tableau updates this incredible resource with every major release and it should be your first stop on the journey to Tableau mastery.

### **Mind-Bending Webinars**

For deeper, more involved talks on visual design, consider watching the recorded webinars at: [tableausoftware.com/learn/webinars](https://tableausoftware.com/learn/webinars)

### Open Online Courses

There are also a myriad of fascinating courses now offered online for low or no cost. Searching with keywords—including data analysis, statistics, databases, communication, and visualization—turned up more than 20 free courses at Coursera and EdX alone.

In the history of humanity, this is a fantastic time to have an “itch” to learn something new. As Mihaly Csikszentmihályi, originator of psychological concept of “flow” has noted, knowledge workers—no longer foraging for the next meal—feel the need to learn new things and to challenge themselves.

### Blogs and Community

Tableau software has had a powerful impact on the lives of a community of elite data analysts. Many of them “give back” through data analysis blogs, whether personal or organizational. Every month Tableau publishes a “[Best of the Web](#)” post that highlights Tableau techniques and commentary. Check out recent posts to find the best Tableau resources on the web.

### Tableau Public

Finally, do not forget [Tableau Public](#). Tableau Public is a free visualization hosting service that is today’s largest repository of online analytics. The online Gallery is a great starting point and anything you find on “Public” can be downloaded and reverse engineered as a learning exercise.

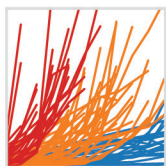
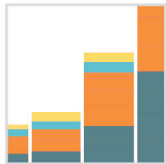
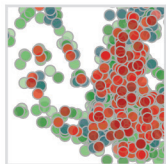
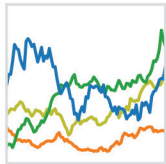
## Feedback

We want to hear from you. Drive is a living and breathing methodology developed from our own and our customers’ implementation experiences. Perhaps you have found something we didn’t consider before. Please send us your ideas and suggestions at: [drivefeedback@tableausoftware.com](mailto:drivefeedback@tableausoftware.com)

Many other helpful videos, white-papers, manuals, and case studies can be found on the Tableau website at: [tableausoftware.com/Drive](https://tableausoftware.com/Drive)

## About Tableau

Tableau Software helps people see and understand data. Tableau helps anyone quickly analyze, visualize and share information. More than 21,000 customer accounts get rapid results with Tableau in the office and on-the-go. And tens of thousands of people use Tableau Public to share data in their blogs and websites. See how Tableau can help you by downloading the free trial at [www.tableausoftware.com/trial](http://www.tableausoftware.com/trial).



## Additional Resources

[Download Free Trial](#)

## Related Whitepapers

[Rapid-Fire Business Intelligence](#)

[Fostering a Data-Driven Culture by The Economist Intelligence Unit](#)

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