CULTIVATING TALENT

Talent isn’t everything, but it sure helps. This guide describes the core competencies that help modern governments accelerate the effective use of data and evidence.
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Talent: finding it and keeping it.

Talent isn’t everything, but it sure helps. Governments need diverse workforces full of hardworking individuals and motivated teams, but they also need specific skills to drive change and get results. For years, government managers have been shopping for talent with the same grocery list: public policy degrees, business acumen, altruistic internships and previous employment in government. But it is time to bring 21st century talent into city hall by rethinking how to find and keep top talent.

In this guide, the Center for Government Excellence (GovEx) describes the core competencies that help modern governments accelerate the effective use of data and evidence. It provides sample position descriptions and ideas for where to recruit top talent. There are tips for taking advantage of existing talent by launching an analytics fellowship, along with sample assessments to help separate the wheat from the chaff. Chapters on building effective teams will help any manager create an environment for collaborative success and empowerment. Throughout the document, GovEx provides concrete examples of these tools in practice in cities across the country.

To assist cities in cultivating talent, the Center for Government Excellence at Johns Hopkins University, a partner in the What Works Cities initiative, has created this guide. By learning from the experiences of other cities and following best practices developed by the Center, cities will be able to hire, motivate, and keep the talent necessary to provide better services to constituents.
Finding & Retaining Talent

A guide to finding, hiring, and retaining data talent

*Focus on the data people.*

You don’t need computer scientists to build government apps or to try new technologies and development tactics. Similarly, you don’t need data scientists or statisticians to develop your team’s analytic capabilities and abilities -- but you do need to find and/or hire people with the basic skills to take on this kind of work, if your goal is to use data and tech in service of your community.

The question becomes: Where do you look, and who do you look for? Internally, can you find staff who might be able to take on data work? Externally, how do you attract people who otherwise wouldn’t think to work in government? Moreover, once you’ve built your team, how do you retain those team members?
Who are the ‘data people’?

Think of the ‘data people’ as anyone with interest in understanding what’s happening in your organization (or the world) using quantifiable information. (This isn’t to say that behavioral interviews, textual analysis of written commentary, and verbal feedback aren’t quantifiable, but the discussion for qualitative versus quantitative is for another time.)

Data people do include analysts, number-crunchers, and budget people. But they also include GIS experts working with geospatial data, anyone who creates infographics, journalists, and storytellers.

- Data people may not have a policy background and that is okay.
- Data people may not have an accounting or statistics background and that is okay.
- Data people may not have a technical background and that is also okay.

Policy, statistics, data science, and technical skills can all be learned. What’s important when looking for these resources, first and foremost, is interest.
Who are the ‘tech people’?

Tech people are not necessarily your IT staff. In fact, they probably shouldn’t be your IT staff, who are likely overworked and under-resourced as it is. Moreover, there is a distinct difference between a technologist who works with data and uses code to build tools and an IT expert whose wheelhouse is likely hardware and systems administration.

Like data people, tech people come from a variety of professional backgrounds that go beyond computer science. You should look for people who self-identify as developers, either front-end (the stuff users see), back-end (the stuff that makes the stuff users see function), or full-stack (the unicorns who do it all). User experience and visual designers are often tech people. The same is true for digital cartographers, multimedia producers, and of course, data scientists.

Tech people may also not have backgrounds in policy, statistics, or data, and that is okay. As with data people, the key factor is interest -- everything else can be learned.

There can be a fair amount of overlap between data and tech people, but someone who would self-identify as a ‘data person’ probably approaches a given project from a different angle than someone who calls herself a ‘tech person.’
Where to find data & tech talent

In House

Take a look at your existing staff and see if there are any obvious uses of data already in place. Who’s producing your maps, budgets, charts, and tables? Those people are already tapping into data sources to create a new product.

You may find that there are people with an interest or aptitude for what you need among people responsible for mapping (GIS), 311 operations, budgets, communications, or project management. If your government has invested in innovations fellowships or anything comparable, those individuals may also be a rich resource for talent.

- **GIS**: GIS staffers are already accustomed to working with data and the technology that drives map production. These skills can be redirected or built upon to support open data, data visualization, and other data science work.

- **311 (or other customer service office that collects data)**: People who deal with residents in your jurisdiction are likely to have a vested interest in understanding, from a data perspective, the work that they do. Sometimes even a cursory look at 311 data can lead to insights that increase efficiencies in a call center and in responses to those calls.

- **Budgets**: The people who write the budgets in your government are used to dealing with numbers, spreadsheets, and analyses of what it all means. They may be open to learning new tools and data skills that can increase their efficiencies in writing budgets, ultimately making that process smoother and less painful.

- **Communications**: Communications teams in your government may be responsible for the city’s web presence, social media, and other external-facing communications. Here’s a great place to tap any journalism and storytelling skills as they relate to data. Is anyone on this team producing infographics or public reports?

- **Fellowships & Innovations Offices**: These jobs exist specifically to try new techniques and to do government work in a non-governmental fashion. These people may already have the data skills you’re looking for and/or the willingness to learn them.

- **Interns**: If you’re looking for something to give your intern to do, data work may be the place to start. Assuming your interns are young (in high school or college), they’re probably already comfortable with technology and may appreciate being given a technical data challenge -- especially if the end result has a measurable impact.

On gauging interest internally:
If you want to get a sense for who would be interested in doing data work, there are a few ways to gauge interest.

- **An online survey:** You can use free tools like SurveyMonkey and Typeform, emailed to everyone you think might be interested. Ask about level of interest, time they’re willing to commit, and previous experience with data. Make sure to collect their email addresses. This is probably the simplest and most expeditious way to gauge interest, but beware that you have have trouble getting responses to any online survey. A little incentive for completing a survey doesn’t hurt.

- **Lunch and learn:** Nothing fancy here -- all you have to do is find a space. Invite your organization to hear a quick talk about data and how you’re hoping to use it during lunch. Try an Ignite format -- 5 minutes, 20 slides -- and leave the rest of the time open for conversation. As with the survey, collect email addresses! Free food is always good incentive, but if you can’t swing that, remind participants to bring their own.

- **Start small and call for volunteers.** If you have a small, non-mission-critical data project, see who responds to a call for volunteers to work on it. You might also consider encouraging people in your organization to go to a local civic hack night. Find one here.

### Externally

Break the mold! Don’t go looking for new government staff at public policy schools. If you want to hire tech and data specialists to do work beyond standard analysis, check out these other places where people learn how to use data and build tools:

- **Information science / information architecture programs:** It’s literally in the name -- these programs teach people to handle information and data, and you may find that graduates are interested in applying those skills for the greater good.

- **Journalism schools and digital newsrooms:** J-schools are increasingly teaching data journalism and data visualization as part of the core curricula. These skills transfer into government. You may also find good people in digital newsrooms, many of which are actively doing data science in the name of storytelling.

- **Civic technology volunteer groups:** These groups, like Code for America’s Brigades and other civic hack nights, are full of people who are already doing some of the work you’re interested in, and would likely be very excited to find a way to do it formally.
How to attract and hire the talent you want

There are a pair of challenges to building any new team within government: the anticipated retirement of a sizeable chunk of the existing labor force and the difficulty of attracting young employees to government.

Traditionally, people would come to government for job security and retirement benefits, offsetting the pay cut that comes with the territory. Today, those benefits are less readily available and private industry -- especially in the startup/tech sectors -- is more attractive than ever, with comparatively excellent pay and benefits.

The common wisdom is that it’s difficult to entice people to government (local or otherwise) because the pay simply can’t keep up -- but it turns out that money isn’t the only, or even the biggest, motivator for people when they’re looking for work. This is particularly true of millennials, who tend to be motivated more by a desire to do meaningful work, as well as by the type of work environment they’re exposed to.

Possibly the biggest blocker to attracting young talent to government is the opacity of hiring practices, combined with an exceptionally long wait time between an applicant’s submission, and hearing back from a hiring manager. This alone deters many potential government employees, who literally cannot afford to wait six months or a year to hear back anything from a position they’ve applied to.

They’re also likely applying to multiple positions simultaneously. This means that even if your position is a number-one choice, you’ll lose out to other organizations that are more responsive and transparent in their application processes.

So, if you can’t offer private-sector pay and perks, or promise traditional government security and longevity, how do you entice people to join your team?

- **Write better job descriptions.** Understand what you really need for the position you’re trying to hire and write the description accordingly. Don’t make the mistake of requiring that a data scientist *also* be a communications specialist *and* an expert programmer *and*...*and*... This has the effect of diluting the quality of candidates who will apply, not to mention overwork the successful candidate -- making her harder to retain.

Make a clear distinction between the skills and experience that are absolutely *required* to do the job you’re asking and those that simply would be nice. For example, is it absolutely necessary to require a computer or information science degree, or would a few years of experience suffice?
This is particularly true for technical positions. You don’t need a computer science degree to be an excellent developer, and listing one as a requirement could cost you qualified applicants.

- **Improve the transparency and responsiveness of your hiring practices.** Be open from the start with what your process looks like, even if it’s not ideal. Is it going to take six months to make a hire? Say so. Does your process include panel interviews, written tests, or code challenges? Say so.

Understanding that changing hiring processes to be faster or more transparent may take months itself, look for ways to indicate to candidates that their applications haven’t been lost in the ether. This means more than an automatically generated email. If there’s someone you’re interested, a quick, personal message explaining your process can go a long way.

In the longer term, are there ways that you can expedite applications? Are there review steps that can be removed or approvals that aren’t really necessary? Is there a way to front-load administrative requirements for hiring, so that candidates in your pipeline are shielded from it?

It may also be important to communicate any changes you’re making to your hiring process, in the hopes of attracting return applicants.

- **Look for alternative benefits or perks as motivators.** If you can’t offer pay competitive to the private sector, what can you offer? Think about ‘soft benefits’ like an excellent workplace culture, a central work location, flexible schedules, or telecommute benefits, conference attendance, and training opportunities.

- **Appeal to people’s sense of service.** You may be surprised to find that the opportunity to serve their community or improve their government is a heady incentive for civic work.

- **Don’t expect to hold on to people forever.** The days of someone staying in a job for 30 years are over. While some people may stay for a few years or a decade, that’s increasingly rare, so accept that people will leave after a shorter amount of time and prepare for it. Make documentation a part of every job and work to preserve institutional knowledge. When someone on your team is ready to move on, offer support.

- **Improve your onboarding.** Reduce frustration as much as you can by putting that aforementioned institutional knowledge to work and make these resources available to new hires immediately. Be transparent about interpersonal and political challenges in your office as much as you can be.
• **Adopt startup standards and practices.** This doesn’t have to be “move fast and break things.” It can be as simple as supporting personal and professional growth, or as complex as instituting an Agile methodology (which is probably a good idea in a tech-oriented team, anyway, but that’s for another resource).

If you can find a way to support a results-oriented workplace, in which your staff defines their own schedules, work habits and locations, vacations, and breaks, so much the better. At least one study showed that a results-oriented workplace reduces turnover among employees, among other benefits.

Can you relax the dress code? Host potluck team lunches? Bring in outside experts who are willing to volunteer their time to teach your team something new? Modify your office to break people out of cubicles and encourage collaboration?

• **Offer training:** Subscriptions to Treehouse and Lynda.com can give great results. But if you’re offering to pay for it, also offer *time* for it. Your new employees may have the drive to teach themselves after-hours (in fact, they may expect to have to), but building in time for them to do this during office hours is a great way to encourage it. If you can, encourage conference attendance as well and make it easy for staff to attend.

Try the ‘see one, do one, teach one’ model. Let your existing practitioners teach anyone who’s interested and make time and space for that teaching to happen.

• **On equipment:** Give your employees control over their own equipment. Yes, there are very good reasons to lock down an organization’s PCs, particularly among a group of less tech-savvy people. Nobody wants to be the person calling IT because they downloaded a virus. However, nobody wants to be the person calling IT every five minutes when they’re trying to run R or another data package and can’t because they don’t have admin rights over their desktops. This sort of control can have a chilling effect on data exploration.

If you can loosen those controls even a tiny bit, so that your data people can install software and run packages, you’ll make their jobs that much easier and more efficient, not to mention encourage them to explore what they can do with data. This is especially true for anyone building apps. At the very least, don’t firewall tools like Google Drive and other free web-based applications.

If you’re worried about viruses, see if you can get your team Macs instead of PCs. They’re a little more expensive, but they’re less prone to hardware and security issues. Plus, they can run Windows in parallel to their own operating system, if that’s a requirement.

• **On policies:** If you think you can’t do something because “it’s against policy,” take another look at the actual language of the policy -- not the interpretation that’s been held as common wisdom. Does that policy actually say what you think it says? Is there a way
to interpret it, or modify it, to support your end goal?

Todd Park, the former CTO of the United States, tells a story: For a very long time, a particular agency refused to use cloud services. The agency cited a policy that made the use of cloud services literally illegal. Turns out, the actual language of the policy didn’t say much of anything at all about cloud computing. Once that was cleared up, the agency was able to move onto a cloud infrastructure, which made their service-delivery jobs much more doable.
Creating an Analytics Fellowship

Everyone Wants Box Seats

Let’s face it. There is something alluring about box seats. Most people can’t afford to buy them, but we jump at the opportunity to use them if someone else is paying. Maybe it’s the chance to rub elbows with VIPs. Maybe it’s the bird’s-eye view, the controlled climate, the better food options, the private bathroom – it appeals to something very innate in human beings – even those who could care less about the game below.

In many ways, box seats are a metaphor for the qualities people crave in their jobs: a better view of the organization, more access to power and talent, and more control. This is especially true in government, where people feel buried within programs, under a pile of regulations and policies, and creeping so slowly up the government ladder they can barely see the top. Even though state and local government has the lowest separation rate of any industry, people are separating at roughly the same rate they are hired. So it’s no wonder government leaders feel constantly strapped for talent. The good news: they have box seats. It’s time to start inviting people inside.

Start Selling Your Tickets

A governor, mayor, or city manager’s office is government’s best box seat. Employees in these offices have a bird’s eye view of the entire government. They get to see how every program functions (or doesn’t function), and how the whole enterprise comes together (or stumbles trying). And they aren’t the only offices who have this view: budget, auditing, performance, and even IT divisions have a unique window into the entire enterprise. So why not pass out tickets to talented employees who want to take a turn in the box seats?

It’s not just the enterprise view that appeals to analytically minded employees, it’s also proximity to power and talent. Human beings, even those in public service, are self-interested. So if doing analysis for policy makers and decision makers in these executive offices can help them get a leg up in their own careers, expand their network, and expose them to a broader team of potential supporters, mentors, and champions, they will take that opportunity.

Perhaps most importantly, people want to be in the room where the buck stops, to see how their analysis gets used by the power players. Many government employees see their work and recommendations go into a black hole and rarely get feedback from decision makers up the food chain on how their recommendations were considered, if at all. Witnessing how senior executives make enterprise-level decisions can have a profound effect on employees’ understanding of the organization, its strategic direction, and where their contributions
matter most. It also makes them feel empowered to see the results of their work get acted upon, because they are operating at a different part of the decision making process than their normal job allows.

So why aren’t more executive offices selling tickets to their box seats? Many feel constrained by a limited number of positions and funding, not wanting to become top-heavy while they lean out other government programs. However, no new resources are required. Any executive office can start attracting the most talented analysts in their organizations by launching a fellowship program. All it takes is time and patience.

**What Is an Analytics Fellowship?**

The analytics fellowship is an idea many people are already informally using. For example, the City of Baltimore promoted several analysts in its Citistat program into program management jobs when their tour with the Mayor’s office ended. Washington, DC’s former City Administrator made it a point to send analysts from his office out into line agencies, adding analytical capacity and performance focus in more parts of the organization. But as Bob Behn writes in his book *The PerformanceStat Potential*:

> This kind of leadership thinking and behavior is unusual. Most government agencies - even some that claim to have created their own version of PerformanceStat - possess little analytical capacity at the operational level. To build this capacity, the U.S. Federal Emergency Management Agency created the FEMASTAT Fellowship, which brings in civil servants (general service grades 9 through 14) for six-month rotations in the FEMASTAT office. These fellows . . . take a high-level, but behind-the-scenes role on some of the most important issues facing FEMA.” The fellowship is open to all permanent, full-time employees of FEMA and the entire Department of Homeland Security, plus Presidential Management Fellows throughout the U.S. Government. The fellowship provides the FEMASTAT office with some extra staff. But it has a longer-term purpose: to help employees acquire the analytical skills and habits of mind that are necessary to ratchet up performance. Then FEMASTAT sends them back to help others develop the capacity to analyze and learn from data.

As you can see, a more formalized fellowship is a reciprocal model: Executive offices get to benefit from the temporary support of current analysts in other parts of the organization, and when they are finished, their home organization gets an infusion of refreshed talent based on the skills and experiences developed during the fellowship.

**How Does It Work?**

Analytical fellowships help build an agency’s, and indeed a city’s, capabilities through professional development. The basic idea is that a portion of the analytical workforce in an enterprise-level office (e.g., Stat program, Performance Management Office, Delivery Unit,
etc.) should be staffed through employee rotations of approximately four to six months. This arrangement is designed to build a culture of analytics and data-infused decision making – and it benefits all participating programs, departments, and employees.

The fellowship staffing model provides insight, experience, and perspectives across the organization to analyze, present, and prepare solutions to government’s greatest strategic problems. For individual participants, the fellowship provides an unparalleled opportunity to enhance their analytical and communication skills while learning about the agency and observing government leadership in practice. For example, in Tacoma, WA, the fellowship program is explicit about how it provides its fellows an opportunity to have regularly scheduled private meetings with the city manager, assistant city manager, and assistant to the city manager. If you structure it well, each fellow takes the skills they have learned back to their home office; ready to apply them in his or her daily work and share the benefits.

However, a strong fellowship isn’t open to just anyone. Employees interested in participating must prove their analytical and communications chops before being selected.
10 Secrets to a Successful Fellowship Program

One: Create a Tough (But Surmountable) Barrier to Entry

If you’re using a simple resume review and interview process to find talented analysts, stop. There’s a better way. One of the worst things to happen to the field of “analytics” was the ubiquity of the “program analyst” in government positions. The word “analyst” means different things to different people, so governments often hire individuals assuming they have quantitative analytics skills when they’ve only been trained in policy analysis. On the flip side, a pure quant often lacks the communications and people skills necessary to navigate decision makers at executive levels of government, so recruiting someone with multi-dimensional skills is sometimes challenging when searching through a pool of “program analyst” resumes.

So how can you search through the haystack to find the talent? You have to create a higher barrier to entry by initiating a screening process designed to test applicants performance on four dimensions:

- Can they do rigorous quantitative analysis to generate insights relevant to the problem at hand?
- Can they convey those insights in coherent and digestible visual presentation?
- Can they communicate their ideas verbally to busy executives?
- Can they get their most salient point across succinctly in writing?

Most people can’t do all of these well, but your screening process should test all of these capabilities so you know where the strengths and weaknesses are before the analytical fellowship begins. We have posted two sample analytical assessments in the appendix. Feel free to modify them to suit your needs. However, the assessment must be identical across all candidates, must test all four of the capabilities above, and must follow these three steps:

- **STEP 1:** Candidate is asked to spend a fixed amount of time analyzing a specific dataset and submit two products as a result: (1) Visual presentation (slides); and (2) One-page memo.
- **STEP 2:** Candidate gives an in-person presentation of slides, explaining his or her findings (and methodology) and choices about what he or she included in the memo
- **STEP 3:** Interviewer(s) asks the candidate probing questions about his or her analysis and memo
Two: Keep Them Longer Than Three Months

Everyone has a learning curve. So plan for spending about three months getting a new analyst up to speed on the methods, subjects, players, and issues in your organization; because they are likely different from the analyst’s home organization. If the engagement is too short, the analysts will never quite hit her stride and feel confident in her contributions. Everyone needs time to settle in, practice, make a few mistakes, and adapt before his or her contribution is firing on all cylinders.

Three: Make Them Work Outside Their Comfort Zone

Human beings often want two contradictory things in their jobs: They want to feel confident that their contributions matter, and they want to feel challenged by learning new things. As you manage an analytics fellowship, the fastest route to delivering the former is to assign analysts to subjects they already know a lot about. But resist the urge to have the fire department analyst work on public safety issues. Instead, focus on exposing them to new issues and ideas. They will benefit by gaining exposure to people and issues they never normally work on, and the enterprise will benefit from having a fresh eyes on its data. So make the public safety analyst work on human services. Make the human services analyst work on public works, and make the public works analyst work on affordable housing. By cross-pollinating the talent across issues, everyone wins, and the fellows will quickly gain confidence in applying their skills to a wider range of issues.

Four: Give Them Appreciative Feedback

Giving constructive feedback is hard for both the giver and the receiver. Most people do not enjoy telling others about their shortcomings and even fewer like hearing them. However, feedback should never be about immutable characteristics. In other words, it’s not about telling an inherently pessimistic person that they are too negative. Instead, think of feedback as an opportunity to help someone optimize his strengths to mitigate his weaknesses. One of the best ways to practice is called appreciative inquiry.

Appreciative inquiry is very simple. Start by saying something you appreciate about what the analyst has done. Then ask them a question about something that strikes you as a potential opportunity for improvement. For example, if the analysts failed to investigate an obvious outlier in the dataset, don’t attack them by saying “why did you ignore this outlier?” Instead, ask them if they considered exploring the reasons for the outlier.

There is real science behind appreciative inquiry, because the act of telling something you appreciate about them disarms their amygdala response, causing people to be less defensive when you then suggest a potential area of further exploration.
Five: Kick Them Out After Six Months

A fellowship wouldn’t be a fellowship if it lasted forever, and six months is the upper limit of what most offices can maintain. First, you’ve probably snagged top talent and the fellow’s home office is likely missing them. Not many managers can live without their best and brightest for too long. Second, the whole point is to get them back out to the programs to fertilize these capabilities across the enterprise. If you hoard the talent for too long, no one else benefits, including you. Once a fellow has returned to her home office, you now have a stronger partner in that program to leverage. It may seem counterintuitive, but if you love something . . . let it go.

Six: Ask Them for Feedback

Feedback is a two-way street, and every fellowship program can benefit from some self-reflection. Self-reflection should occur at (at least) three different times during the life of the fellow. During the fellowship, managers should check in with the analysts on how their experience is going so it can be adjusted mid-flight.

At the conclusion of the fellowship, fellows should complete a user-friendly survey to express how they felt about the experience overall and what recommendations they have for improvement. After the fellowship, managers should check-in with the analysts on whether the fellowship is having an effect (positive or negative) on their professional growth and experiences. To get you started, here are some questions to consider asking:

- Did you feel welcome and included?
- Did you gain valuable knowledge?
- Did you gain valuable experience?
- Are you glad you accepted the fellowship?
- Did your work directly support senior leadership’s ability to make decisions?
- Did your work help the organization focus on the most critical challenges we face?
- Did your work influence the future direction of the organization?
- Did you receive valuable feedback from the Fellowship Director?
- Did you feel comfortable enough to share honest and constructive feedback with the Fellowship Director?
- Did you feel comfortable enough to share honest and constructive feedback with other fellows?
- Has the fellowship helped you advance your own career goals?
- What are the top three changes you would make to the fellowship program to make it more valuable?
- How likely are you to recommend this fellowship to other employees?
Seven: Maintain a Relationship

One of the main reasons Baltimore promoted analysts into program management jobs when their tour with the Mayor’s Citistat ended is because it helps drive the practices into the organization while simultaneously installing feedback loops between executive offices and programs. Those feedback loops can provide a valuable ground truth to executive decision makers as they strive to make lasting impacts on programs and outcomes. But feedback loops only exist through relationships, and relationships require nurturing and support.

Consider creating an alumni network of past fellows who stay connected and communicate honestly about the reality of post-fellowship life in the programs. As their work on the front lines shapes the way business gets done, it also informs leadership about cultural dynamics, opportunities for improvement, and resistance to change. Alumni of the Presidential Management Fellowship program created a group focused on continuously improving the program and supporting current and former fellows.

Former fellows are the ambassadors of analytics in the organization, and people look to them for insights about “what it’s really like” in the box seats. So make sure to maintain a positive and supportive relationship with them. By building a lasting bond of trust with each fellow, strong relationships will flourish and the enterprise will reap benefits for years to come.

Eight: Celebrate Their Successes

Data isn’t the hero, the people who use it are. So find ways to celebrate their professional (and personal successes) from the moment they walk in the door and never stop making them feel appreciated. Celebrate their birthdays. Ask about their families, and celebrate major life milestones with them (having a child, buying a house, kid’s graduation, years of service). People want to matter, and you should make every fellow feel like they matter to you.

As they complete analytical projects, give them credit for their work and highlight how profoundly important it is, not just for now, but for those in the organization whose brains were stimulated by the experience of working with them. Celebrate their role helping build a culture of inquiry informed by data and evidence.

Even after they leave, communicate future successes (promotions, big projects, etc.) to the alumni network. Make it clear that you care about their career advancement, not just their career as it relates to your work. As you celebrate them publicly, invite others to submit stories or milestones they are proud of. There are countless people working tirelessly in the shadows who deserve recognition, so use your position to elevate theirs.
Nine: Keep Them Out of the Pigeonhole

One of the biggest dangers in doing an analytics fellowship is that you get pigeonholed as “the analyst” or “the Stat guy.” The home organization treats the fellow like their highest valued use is to be the liaison between the program and the mayor’s office. One fellowship program tried to mitigate this by writing language similar to the following into the Memorandum of Agreement with the program offices:

At the conclusion of the fellowship, the program agrees to assign the fellow a workload that does not involve direct interaction with the STAT Fellowship program as a primary responsibility. Instead, the program agrees to make every effort to expand the fellow’s breadth of experiences to foster continuous professional growth.

Putting explicit language in an MOA is not necessary, but it useful to spell out the expectations up front, so everyone involved is clear that this is ultimately about the development of talent within the organization.

Ten: Share Beyond Your Borders

Finally, consider creating a fellowship that extends beyond the bounds of your organization. The most iconic fellowship program – the federal government’s Presidential Management Fellowship – advertises itself as an opportunity to leap from one organization to another:

Your two-year appointment will provide a fast-paced opportunity to gain experience and develop your talents. You will be challenged with opportunities to flourish into a problem solver, strategic thinker and future leader. In addition to working at a single Federal agency, you may have the option to participate in a rotational opportunity at another agency. These rotational opportunities will challenge you even further and give you insight into how other areas of government operate.

Cities have taken notice. Long Beach, CA has a fellowship program for recent grads to spend a year rotating through four different departments. The Johns Hopkins University Applied Physics Lab has a 2 to 12 month fellowship for federal government employees. ICMA even has a three-month talent exchange program between local governments.
Sample Analytical Assessment A

Background

- **Purpose:** Demonstrate analytical competence by turning raw data into information that aids decisions.
- **Tools Provided:** Excel spreadsheet & executive-level instructions
- **Tools Not Provided:** software, detailed instructions, helpful hints
- **Estimated Time to Completion:** 16 full working hours (2 working days)
- **Deliverables:** memo and PowerPoint presentation (or suitable alternative to PowerPoint)

Scenario

The CEO of an office supply company (StapleTown) has called a meeting of her top managers to prep for a conference call with investors. She wants to discuss the company’s performance with her management team prior to that call. The investors always have excellent questions and she needs to be at the top of her game – demonstrating a mastery of details while keeping the conversation high-level and strategic. You are Chief Analytics Officer of the company, so your job is to make sure the CEO is prepared for her call, using the latest sales data. A member of your staff sent you an extract of the company’s sales transactions since the company was started in January 2010, and you are going to spend the next two days analyzing that data to see what insights it reveals. The CEO provided you a list of questions she thinks the investors will ask, but she expects you to highlight any useful information that might be relevant.

Data

The sales data is available [here](#). Note that it includes two tabs: one for sales and another for returns.

Questions from the CEO

- What are the factors that influence the company’s profitability?
  - Which product categories are the most profitable? Which are the least?
- What does our customer segmentation look like, and how does that relate to profitability?
  - How do purchasing behaviors change by customer segment and region?
What are the factors that influence the company’s sales, and how do they relate to profitability?
Where are we losing money?
How do sales and profitability change over time?
How is our performance getting customer orders shipped quickly?
What do we need to understand about trends among returns?
What geographic regions should we be targeting based on sales and profitability?

Deliverables

The CEO would like answers to all of her questions above. She typically likes brief memos and rarely has time to read long reports. In addition, many people on the management team are visual learners, so she wants you to prepare a PowerPoint presentation showing your key insights. Once you've finished, submit both deliverables to this@email.gov. Your work will be reviewed to determine if an in-person interview is the appropriate next step. If so, you will present your findings at the beginning of the interview.
Sample Analytical Assessment B

Background

- **Purpose:** Demonstrate analytical capability, presentation quality, and creativity
- **Tools Provided:** spreadsheet & high-level instructions
- **Tools Not Provided:** software
- **Estimated Time to Completion:** 1-2 hours
- **Deliverables:** Five minute verbal presentation (using PowerPoint or suitable alternative)

Scenario

Imagine you are in the Wild West (1800s America) and you are helping bring order along and law enforcement across several states. Your team has been assigned to capture as many wanted criminals as possible. A key incentive is that the criminals have bounties that you’ll be awarded with. Your job is to maximize the bounties and manage your risks. Using data we want you to come up with a compelling strategy on how you’ll do this.

Data

The data is available [here](#). Note that it includes hidden columns which you do not need to worry about.

<table>
<thead>
<tr>
<th>Fields</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Not all outlaws have a name.</td>
</tr>
<tr>
<td>Current Affiliation</td>
<td>Most outlaws are independent, some are part of a gang. Gangs represent a tradeoff, they’re an opportunity to capture many fugitives at once but they’re potentially more dangerous.</td>
</tr>
<tr>
<td>Charge</td>
<td>There are 5 charges. They could be used as an indication of violence and sophistication of the criminal.</td>
</tr>
<tr>
<td>Jurisdiction</td>
<td>There aren’t many roads in the territories.</td>
</tr>
<tr>
<td>Bounty</td>
<td>Maximize their bounty.</td>
</tr>
<tr>
<td>Last Seen</td>
<td>Indication of who would be easiest to find. Perhaps.</td>
</tr>
</tbody>
</table>

Instructions
Using the data file, your knowledge of movies, and your intuition, create a plan for your posse for the next four months. Be explicit about your assumptions (i.e., We’re taking a train to Oklahoma and then traveling by horseback). Maximize returns (bounties!), and limit your risks (i.e., gunfights with dangerous outlaws!). Once you have a plan, support your plan with data from the most wanted list. Please keep the plan brief. Before you get started, just a few thoughts. Prioritize and maximize bounties, and remember that some villains are more dangerous than others. How much risk are you willing to take? Finally, you’ve only got four months, it takes time to travel in the territories and time to track a villain.

**Deliverables**

Draft a one-page memo and create a five minute presentation of your plan to make America safer by maximizing bounties while limiting risk. Support that plan with the analysis of the data provided. Once you’ve finished, submit all deliverables to this@email.gov. Your work will be reviewed to determine if an in-person interview is the appropriate next step. If so, you will present your plan at the beginning of the interview.
Inventory of Existing Fellowship Programs

Federal

- US Presidential Management Fellows (PMF)
- Johns Hopkins University Applied Physics Laboratory (APL) Government Employee Fellowship Program
- FEMASTAT Fellowship

State

- Washington, DC: Capital City Fellows Program

Local

- Kansas City, MO: Cookingham-Noll Fellowship
- ICMA: Management Talent Exchange Programs
- ICMA: Local Government Management Fellowship
- Wichita, KS: Management Fellowship Program
- Long Beach, CA: Management Assistant Program
- Tacoma, WA: Tacoma Management Fellowship
- San Antonio, TX: Management Fellows Program