Make R a Legitimate Part of Your Organization

2016-11-16

by Nathan Stephens

How R Enters Through the Back Door

In many organizations, R enters through the back door when analysts download the free software and install it on their local workstations.

> *Jamie has been an avid R programmer since college. When she takes a new job at a large corporation, she finds that she is the only analyst in the company who knows and uses R. In addition to the other tools her company gives her, Jamie decides to download R onto her laptop. She installs R without consulting her manager or IT. With R she can pull data, build models, and create nice reports. Her manager knows nothing about R, but goes along with it because Jamie is happy and doing quality work. Her co-workers, ever curious about analytics, also download R and learn from Jamie. Before long, R becomes an important part of the day-to-day operations of her team. When Jamie starts hiring new analysts, she lists R as a required skill. Now Jamie wants to "go big" by putting R on the company servers so she can scale her analyses, socialize her results, and integrate her apps. Unfortunately, she finds she is unable to get the resources she needs because R is not officially recognized in the company.*

Whether you are an analyst wanting to do more, a stakeholder wanting a competitive analytic platform, or an IT professional wanting a controlled and secured environment, you should make R a legitimate part of your organization and get the resources needed to support it.

Bringing R Through the Front Door

All organizations have a process for onboarding software through official channels. If you are part of a large organization, your IT department probably has a review board whose purpose is to review and make decisions about new tools.

> *The last time I introduced R into an organization, I created a presentation explaining why R should be supported by IT. My proposal was presented to the IT review board. It included slides on cost savings, strategic advantages, hardware and software requirements, and more. It took a few iterations to get through all of the requirements, but in the end, the board approved R as an additional analytic standard, paving the way for future growth.*

```
600:gae_exception:'600:fetch gae fail'
https://www.slideshare.net/slideshow/embed_code/key/slRGUZHuzIA5ld
```

The review board is responsible for:

- **Reviewing new software initiatives and approve expenditures.** Does this tool increase or decrease costs? What line items will this go under? What is the long-term cost projected to be? What is the cost of support?
- **Supporting the organization's strategic vision.** Does the tool help satisfy a customer need? Does it help us remain competitive? Can it help us attract better talent? Does it make existing systems more efficient and agile?
- **Complying with existing systems architectures.** Does the tool integrate with other supported tools? Will it be used in development and/or production? Does it

duplicate the capabilities of other supported tools?

- **Managing risk and ensure security.** Does the tool comply with our formal security policies? Do the software licenses meet our legal requirements?
- **Defining roles and responsibilities for support.** What groups own the tool? What support is offered with the tool? What internal resources will be required to maintain it? Who will provide training?

Because of R's popularity and explosive growth, many organizations are friendly and even eager to bring R through the front door. If your organization is friendly toward R but has not made it an official part of the organization, a formal review process is still valuable. The review process gives IT a formal stake in the ground when it comes to supporting R for the long term. It also makes future decisions about growth and investment much easier.

The Ubiquity of Open Source Software

Here at RStudio, we work with customers every day who want to bring R through the front door. One complaint we sometimes hear is that IT does not want to support open-source software (OSS). The reality is that most organizations are already supporting OSS. The 2016 future of open source survey estimated that 78% of companies run part or all of its operations on OSS.

Most organizations know about R by now. IEEE Spectrum ranked R fifth in the top programming languages of 2016 making it one of the most commonly used analytic tools in industry today.

Language Rank	Types	Spectrum Ranking
1. C		100.0
2. Java		98.1
3. Python		98.0
4. C++		95.9
5. R		87.9
6. C#		86.7
7. PHP		82.8
8. JavaScript		82.2
9. Ruby		74.5
10. Go		71.9

Top Languages 2016

Some organizations struggle to standardize on R due to a lack of management and governance around OSS. At the same time, organizations may neglect R on user

workstations, thereby increasing security, legal, and operational risks. It is riskier to leave R unmanaged than it is to bring it through the front door.

Getting the Resources You Need

Passing the review board should get you resources. You'll need physical resources and human resources to build, scale, and maintain an R environment.

Physical Resources

Investing resources in R is a great way to legitimize it. An organization that allocates budget and people into R will also expect to see value from that investment. In effect, spending money on R is legitimizing it. Some resources you need might include:

- A budget or line items in a budget
- Physical or virtual hardware
- Software tools and licenses

Human Resources

The type of IT support you get will depends on how your IT organization is structured. You might have a single admin designated to support R, or you might have an entire support team. You will probably want to define the following roles and responsibilities:

- An R advocate who promotes R
- An executive sponsor who supports the R users
- A designated R admin or R support team

Your IT support will manage your environment, so getting the right people and policies in place is critical. Generally speaking, having a point of contact in IT — a name and a face — is a good thing. Your admin support should be familiar with the Linux operating system. Training admins on R-related issues is also helpful.

Adopting R

After you bring R through the front door and it becomes part of the organization, you should have a vision and path for growth. You should also have resources to support that growth. So what are you going to do with your newfound resources?

The next step is adoption. Adoption means R is self-sustaining. The goal is for your organization to fully embrace R as an integral part of your business. The survival of R should not depend on one or two R advocates any more than SQL depends on one or to DBAs. Instead, there should be systems, resources, and people in place that will sustain the growth of R.

Making R a legitimate part of your organization and getting the resources you need to support it is the foundation for future growth and adoption.

R for the Enterprise · Finance · Applications · R Language R

Comments Share

OLDER

RStudio IDE Easy Tricks You Might've Missed

NEWER

Reproducible Finance with R: A Sharpe Ratio Shiny App

You may leave a comment below or discuss the post in the forum community.rstudio.com.