2020 Infrastructure Priorities Report

Doing infrastructure well means doing it differently.

EXECUTIVE BRIEF

INFO~TECH
RESEARCH GROUP

Executive Summary

Infrastructure

IT people are busy. According to Info-Tech's IT Staffing Assessment diagnostic program, IT professionals spend most of their time maintaining and administering existing systems – important work, but not valuable in the same way as project work can be.

There is always more to do, and if IT leaders are to grow with the business, provide meaningful value, and ascend the ladder to true business partner and innovator status, aggressive prioritization becomes necessary.

This priority report highlights how hundreds of different organizations have approached this challenge, what they've chosen to prioritize, and some common themes and implications.

Infrastructure leaders are uniquely positioned to enable value up and down the stack. As the transition towards cloud services continues and infrastructure roles evolve to meet new business requirements, a change in skills, mindset, and technology deployed will become crucial to organizational success.

Ultimately, understanding how changes in technology and patterns of work stand to impact the day-to-day lives of IT staff across seniority and industries will allow you to evaluate what your priorities should be for 2020. Ensure that you're spending your time right. Use data to validate. Prioritize and implement.
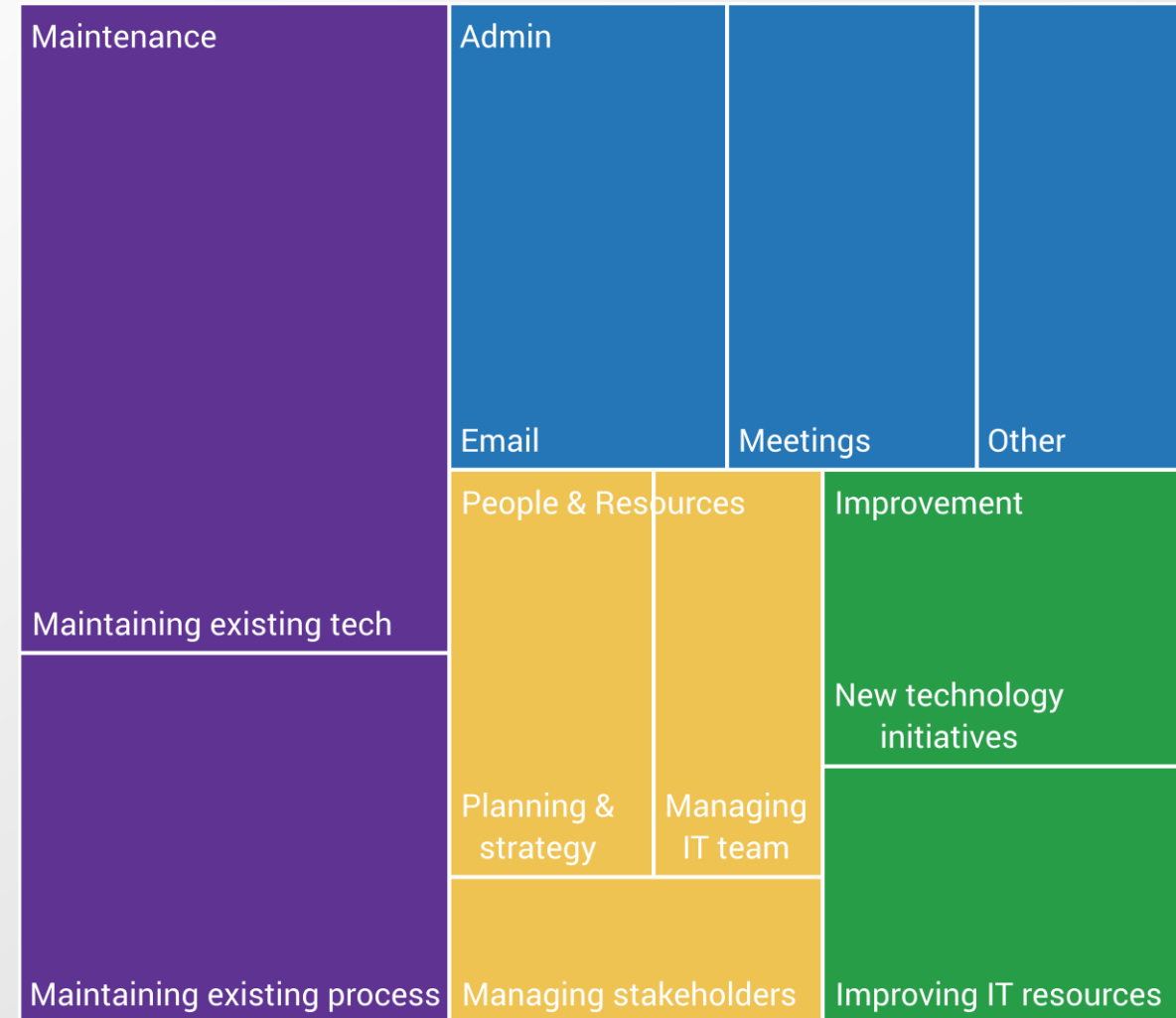
IT people are busy

Maintenance and admin dominate time spent

- According to **Info-Tech's Staffing Assessment** more than **50% of IT time** is devoted to administration and maintaining existing technology and processes. This is important work, but it will not on its own move IT to business partner status.

- Almost **60% of respondents** believe that their infrastructure can be run more efficiently through eliminating wasteful or low-value activities.

- With so little time available for new technology initiatives and improving IT resources, ensure that those initiatives that do make it out of the gate are important, valuable, and timely.

- Reducing administrative and maintenance work will drive business value and improve employee satisfaction — higher-value work also tends to be more engaging and fulfilling.

IT time allocation

■ Admin ■ Maintenance ■ People & Resources ■ Improvement

Maintenance	Admin		
	Email	Meetings	Other
Maintaining existing tech	People & Resources		Improvement
	Planning & strategy	Managing IT team	New technology initiatives
Maintaining existing process	Managing stakeholders		Improving IT resources

What is a priority?

It's important to know!

Everyone knows what a "priority" is in the strictest sense. When it comes to IT, it's fair to think of a priority as a project or initiative that is more important than — and therefore takes precedence over — others. For the purposes of this report, foundational activities, like keeping the lights on, while important, are table stakes – not priorities. A priority has two key characteristics:

- Importance: the project must be slotted for work in calendar year 2020

- Newness: it must be a new initiative or significant revision to an existing platform or service

Revised definition:

A priority is a distinct initiative that is more important than all or most others and reflects or inspires an important change in the way we do IT.

Others' priorities shouldn't dictate what you work on in 2020. They do provide context, however, and important information about how changes in the market drive changes in the day-to-day business of IT.

Methodology
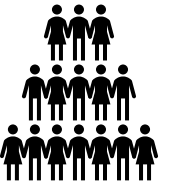
The questions we ask impact the answers we get

Qualitative + secondary

We started with a long-listing exercise. What trends did other research organizations and our members identify as important to them over the past few years? Our goal was to determine if trends have transitioned into priorities.

Large-n survey

To evaluate priorities, we used a large-n survey. 460 respondents answered questions about their priorities, organizations, and personal characteristics. We used this data to determine what IT professionals are focused on.
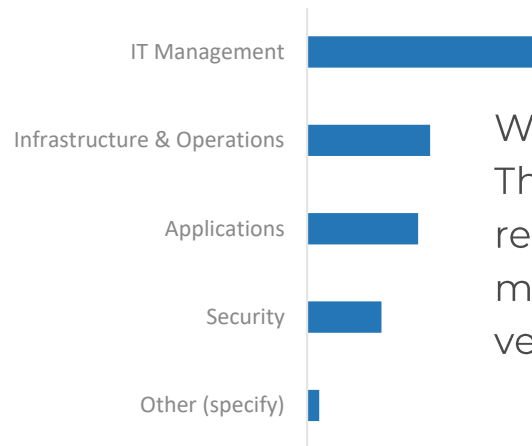
Qualitative drill down

We used the survey to winnow the list of priorities. We then conducted additional qualitative research to understand how our respondents may have selected the responses they did. Further secondary research and insight rounded out the project.
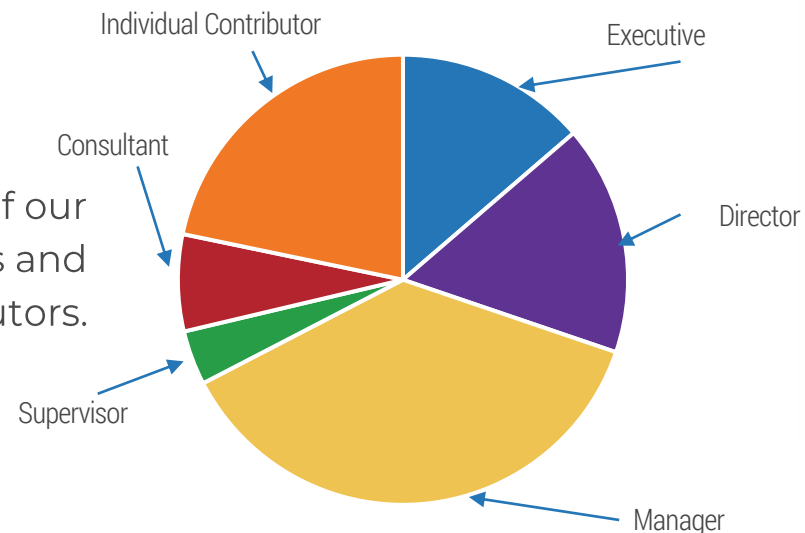
Demographic info

Respondents by role

We allowed users to tell us their role. They were allowed to select all relevant functional areas, and management was the most popular vertical.

Managers made up a plurality of our sample, followed by directors and individual contributors.

IT Management

Infrastructure & Operations

Applications

Security

Other (specify)

Individual Contributor

Executive

Consultant

Director

Supervisor

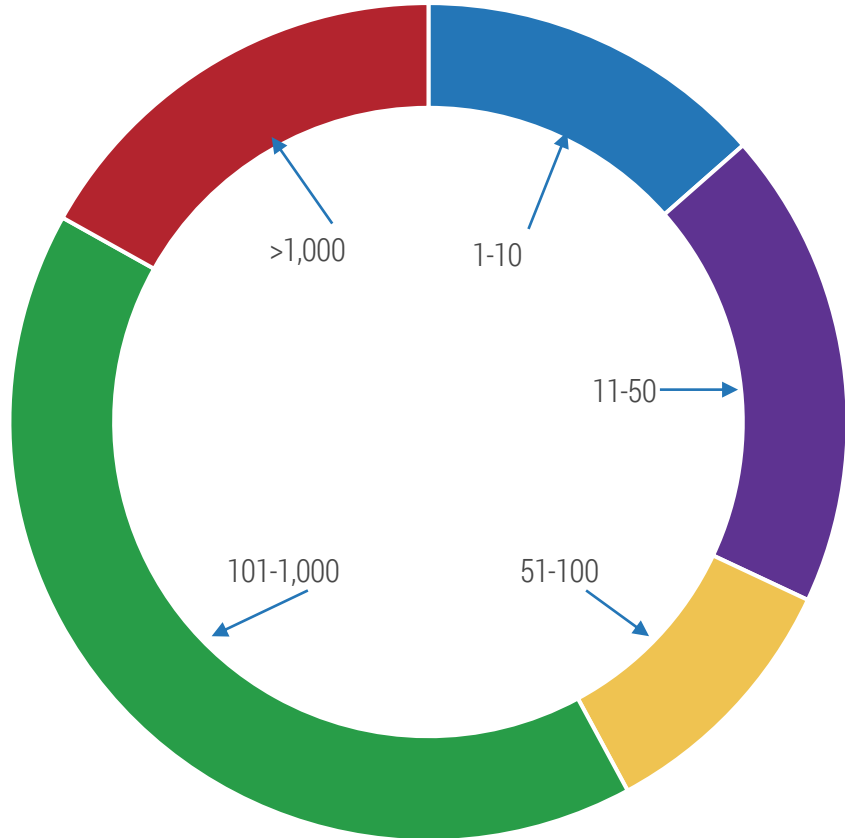Manager

Our sample is broad

Hundreds of managers, directors, and executives with department-level perspectives from across the United States filled out our survey in September 2019.

Info-Tech Insight

We used several methods including attention-testing questions and geo-matching IPs to verify respondents.

Demographic info (Continued)

Respondents by # of people in IT

- 1-10
- 11-50
- 51-100
- 101-1,000
- >1,000

Industry respondents

- Mining
- Arts & Entertainment
- Agriculture
- Food & Beverage
- Real Estate
- Utilities
- Gaming & Hospitality
- Construction
- Transportation & Warehousing
- Professional Associations
- Other (specify)
- Retail & Wholesale
- Education
- Government
- Manufacturing
- Healthcare
- Financial Services
- Media & Information
- Software & Technology
- Professional Services

Five Priorities

Survey says...

Internet of Things

Smart devices, ranging from intelligent microwaves to autonomous robots for manufacturing, have left the realm of speculation and permeated businesses small and large. Cloud providers have enabled the transition by offering IoT toolsets, and IT professionals are busy preparing their environment to create value with non-traditional computers.

Network Modernization

As the nature of service delivery changes to rely more on the internet, and as software eats the networking world, network modernization is a crucial project. Redesigning networks to account for the predominance of the client-cloud relationship, implementing new technology like SDN, and exploring standards like 5G are all key 2020 IT priorities.

Automation for Infrastructure and Operations

Any IT shop with a view to the future is exploring automation — and infrastructure and operations offers ample opportunity to reduce rote, manual work. Powered by cloud infrastructure services that natively embrace automation, the promise of "infrastructure-as-code" is more real in 2020 than it's ever been.
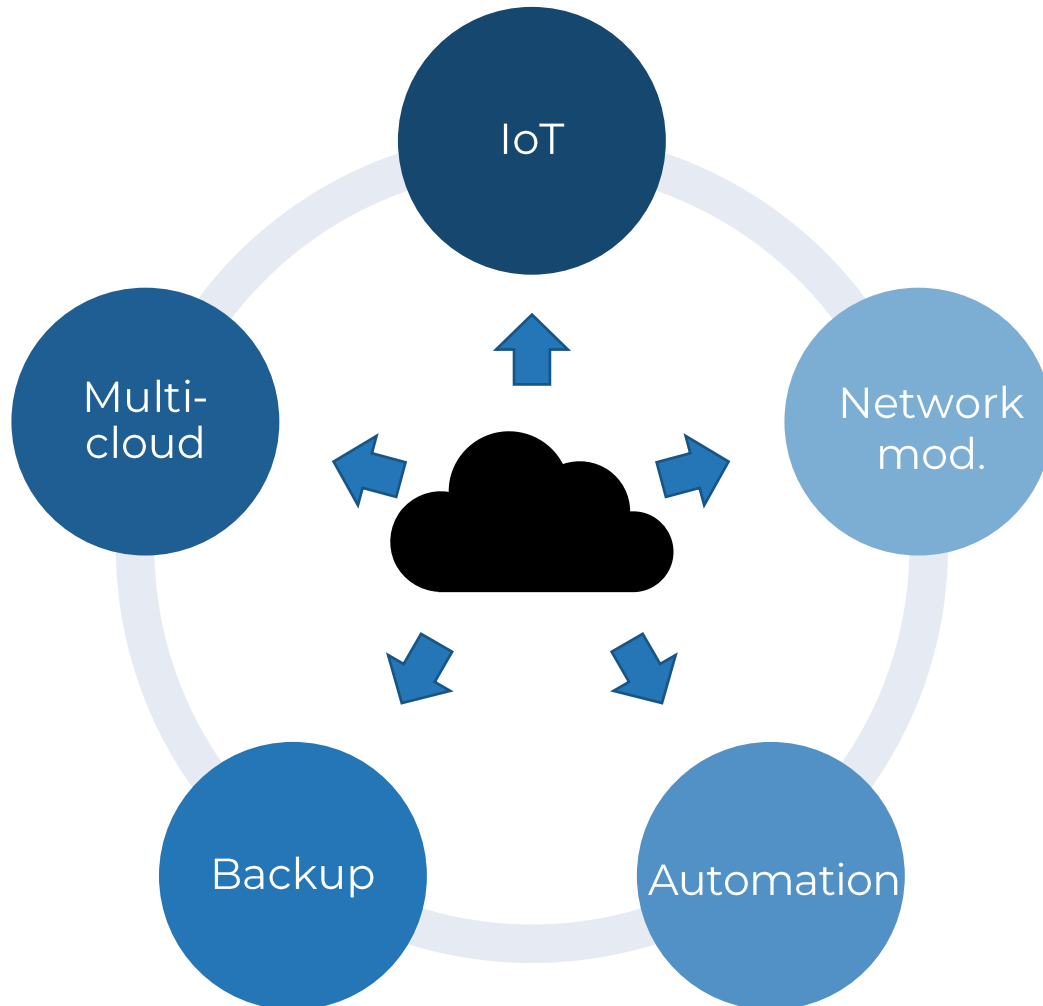
Backup and Data Protection

Doing IT differently means doing backup differently. Organizations are struggling with how the transition from traditional backup to "data protection" and the migration to cloud services changes the opportunities and responsibilities available to them.

Multi-Cloud

Every vendor has a cloud. Like potato chips, you can't eat just one. Organizations are forced to the multi-cloud by the narrowing of on-premises options, but many are using the opportunity to explore how multi-cloud deployments can give them an advantage.

One theme: cloud

IoT

Multi-cloud

Network mod.

Backup

Automation

Cloudification drives priorities

The cloud, comprising software, platform, and infrastructure services, represents a new way of delivering IT services and transitions away from traditional, on-premises service delivery.

Cloud services, characterized by broad network access, rapid elasticity, measured service, resource pooling, and on-demand self-service, are on the rise.

For the first time since records have been kept, **total infrastructure spend in the cloud was greater than 50%** of the total in Q3 2018.[1]

1. IDC

Cloud

We do infrastructure differently in the cloud era

Once a pipe dream, ubiquitous cloud services have changed the way IT provides services — full stop. Cloud providers, ranging from massive public cloud infrastructure-as-a-service companies like AWS to tiny software-as-a-service startups, promise to bring cost-effective agility and scalability to the workplace. And IT shops are buying in.

Today, nearly half of all cloud spend is concentrated in SaaS (Gartner), with enterprises and smaller organizations scrambling to adopt solutions like Office 365 and Salesforce.com. Not to be outdone, infrastructure- and platform-as-a-service growth is also high, and AWS has an annual revenue of over $25 billion, largely on the back of its infrastructure services.

Providers are pivoting to meet this increased demand, with new services launched by all the major cloud providers regularly. Amazon, Microsoft, Google, IBM, and Oracle all understand what is at stake and are vying for the potentially lucrative hybrid cloud market.

It's not all good news, however. The cloud is a powerful tool, but it brings new risks, costs, and necessary changes if it is to be implemented successfully.

84%

The percentage of organizations that report having a multi-cloud strategy (Flexera).

50.9%

Total infrastructure spend in the cloud in Q3 2018 — greater than half for the first time (IDC).

$332 billion

Total projected cloud spend by 2022 (Gartner).

Impact

	People	Process	Technology
Internet of Things	• IT will need to better integrate into the operational technology environment. Lines between IT and OT will blur.	• Managing and maintaining IoT devices will require updates to service management processes (particularly asset management).	• Cloud IoT platforms like those available from Amazon and Microsoft will be required to maintain the environment.
Network Modernization	• New skills are required to take advantage of new networking technology. • Push towards infrastructure-as-code.	• A modern network can facilitate speedier processes (such as standing up new branch offices).	• Truly leveraging the power of cloud services becomes possible with a modern network. • Software-defined networking (SDN) gives staff additional levers.
Automation for Infrastructure and Operations	• A focus on higher-value work should improve employee morale and engagement.	• Manual processes should be automated. • App deployment, infrastructure management, and orchestration should happen seamlessly.	• New technology like Chef, Puppet, and Ansible will likely enter the environment, facilitating the effective use of cloud infrastructure services.
Backup and Data Protection	• Little direct impact on staff. • New focus on ways to manage backup and data.	• Recovering from a disaster or security incident will be more effective. • Staff will need to develop and implement new backup policies and procedures to account for changes.	• Backup is now more than simple point-in-time snapshots. It is dynamic, may be hosted offsite, and presents a different set of challenges (like how to restore "the cloud").
Multi-Cloud	• Staff will need to develop skills in vendor management and service brokerage. • Staff will need to retrain on new cloud stacks.	• Procurement processes will need to be updated. • Transition from CapEx to OpEx. • Operational processes will need to account for SaaS/PaaS/IaaS in the environment.	• Managing a multi-cloud deployment may require orchestration software or management software.

How to read this deck

Description

What is the priority?

Signals & Drivers

Why do we think it's a priority?

Benefits

What can be achieved with successful implementation of the priority?

Critical Uncertainties

Why wouldn't someone pursue the priority?

Case Study

An example of the impact of implementing (or failing to implement) the priority

Implications

What does the priority mean for – and say about – IT.

Conclusion

Summary and further reading.

Bibliography

Sources! Sources! Sources!