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# Introduction to DevOps

**Sonika Rathi**

Assistant Professor  
BITS Pilani

# Agenda

## DevOps : People & Tools Dimension

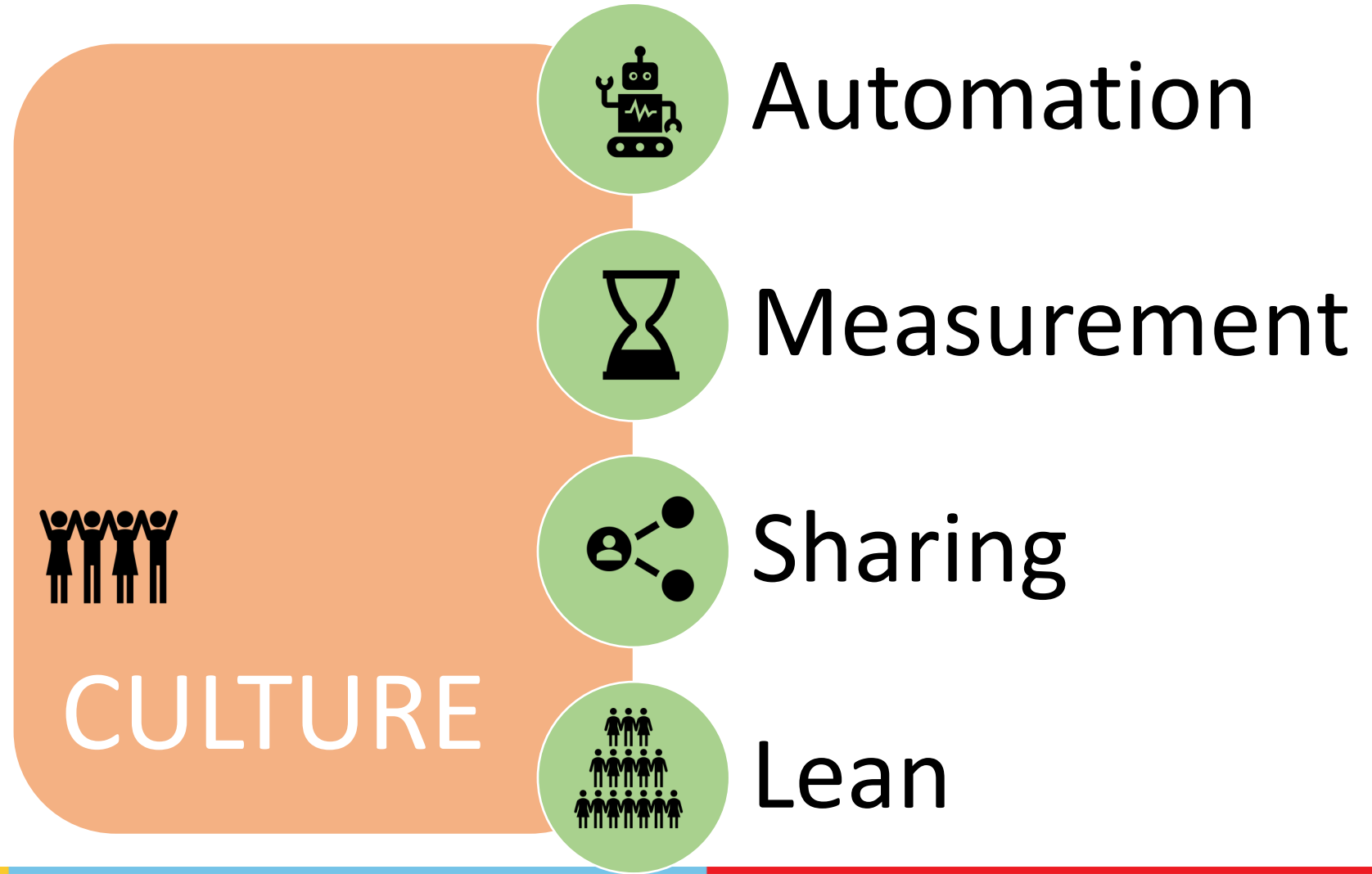
- Transformation to Enterprise DevOps culture
- DevOps - People
- DevOps – Tools



# Transformation to Enterprise DevOps culture

## DevOps Values

More than anything else, DevOps is a culture movement based on human and technical interaction to improve relationships and results



# Transformation to Enterprise DevOps culture

## Initial Planning for Enterprise Readiness

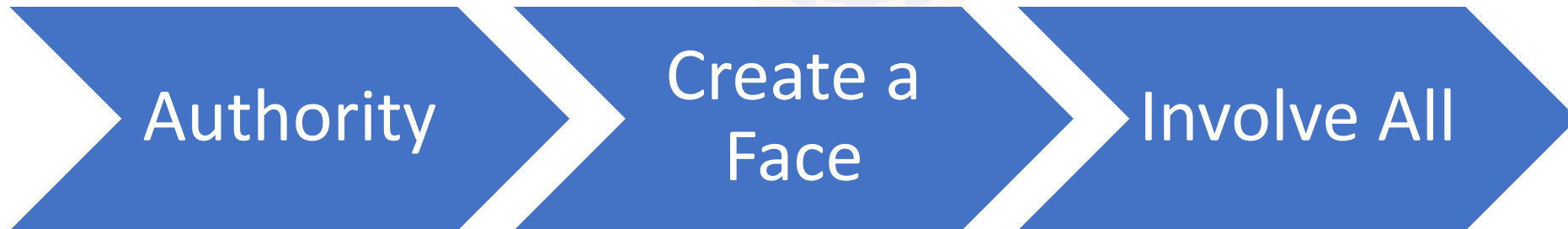
- Participants should absolutely include all the towers that make up the solution delivery
- Design Thinking : It is a great method; it leverages the expertise of all stakeholders, enables them to come to a common understanding
- High Level Output



# Transformation to Enterprise DevOps culture

## Establish a DevOps Centre of Excellence

- At the right organizational level and enterprise authority
- Create a Face: It has to be led by an enterprise leader who has the support and buy-in from all the towers
- Active Participant from All Towers of Delivery & Participants must be chosen wisely
- These phases help concrete the vision and strategies of organization and help in setup the best practices to support cultural movement





# Transformation to Enterprise DevOps culture

## Establish Program Governance

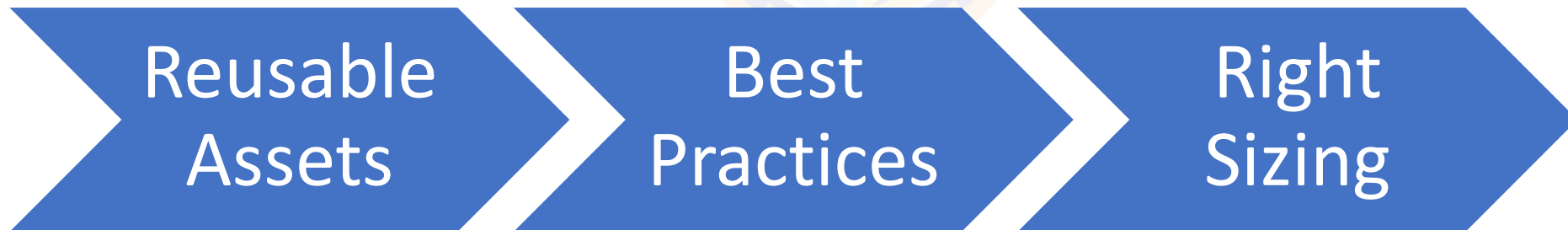
- Agile and DevOps, practitioners' roles and responsibilities will change
- Need awareness, enablement and empowerment to succeed
- KPIs must shift from individual metrics to holistic customer business outcomes



# Transformation to Enterprise DevOps culture

## Establish Project In-take Process

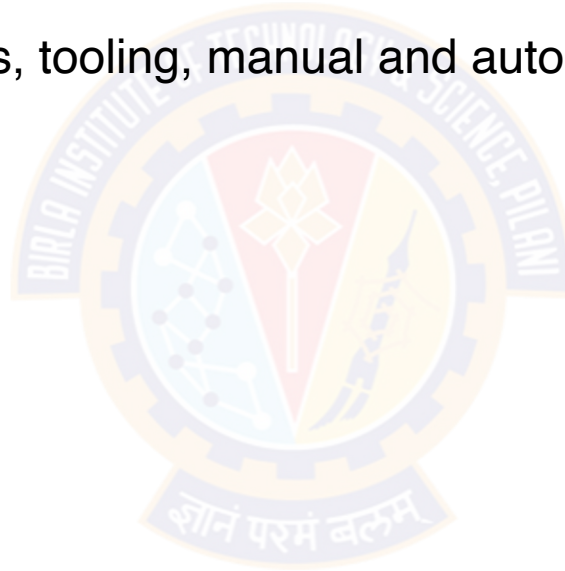
- DevOps SME's conduct in-take workshops for Scrum Teams
- Automation scripts, Infrastructure assets
- Test Automation, Branching and Merging & Lessons Learned
- Fit for purpose tool selection and Application Criticality



# Transformation to Enterprise DevOps culture

## Identify and Initiate Pilots

- Value stream-mapping exercise
- Level of detail necessary:
- To identify end to end as-is process, tooling, manual and automated processes
- And skills and people





# Transformation to Enterprise DevOps culture

## Scale Out DevOps Program

- Onboard Parallel Release Trains
- Apply Intake Process
- Support, Monitor and Manage



# DevOps - People

## People

- DevOps is a cultural movement; it's all about people
- Building a DevOps culture, therefore, is at the core of DevOps adoption


**An organization may adopt the most efficient processes or automated tools possible, but they're useless without the people who eventually must execute those processes and use those tools**

- DevOps culture is characterized by a high degree of collaboration across roles, focus on business instead of departmental objectives, trust, and high value placed on learning through experimentation
- Building a culture isn't like adopting a process or a tool
- It requires social engineering of teams of people, each with unique predispositions, experiences, and biases
- This diversity can make culture-building challenging and difficult

# DevOps – People

## Managing People, Not Resources

**“Managing teams would be easy if it wasn’t for the people you have to deal with”**

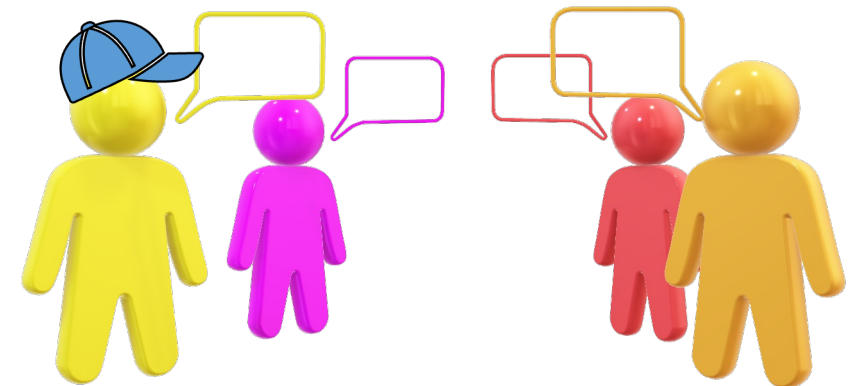
- Calling people as resources 
- A resource is something you can manage without much tailoring
- With people, that is never true
- For an Example: We have probably all been planning for projects and creating a plan that includes a certain amount of “anonymous full-time equivalents (FTEs).” Then a bit later, we start putting names to it and realize that we need more or less effort based on the actual people we have available for the project
- One Java developer is just not the same as another; and honestly, we would never consider ourselves to be just a resource whose job someone else could do with the same efficiency and effectiveness



# DevOps – People

## Don't change Organization; Change your self

- You will not be able to get the organization to change
- But what you can do is change your part of the organization
- Manage your teams the way that you would like to be treated
- As you climb higher in the hierarchy, your area of influence will increase and, with that, a larger and larger part of the organization will work the way you would like it to
- Ex. “Jack Welch” he was the CEO of General Electric till 2001, his cabin was of all transparent glass; And this cabin did not have any door. So, it was an open-door cabin. And the label on the door was “PLEASE DISTURB ME”.



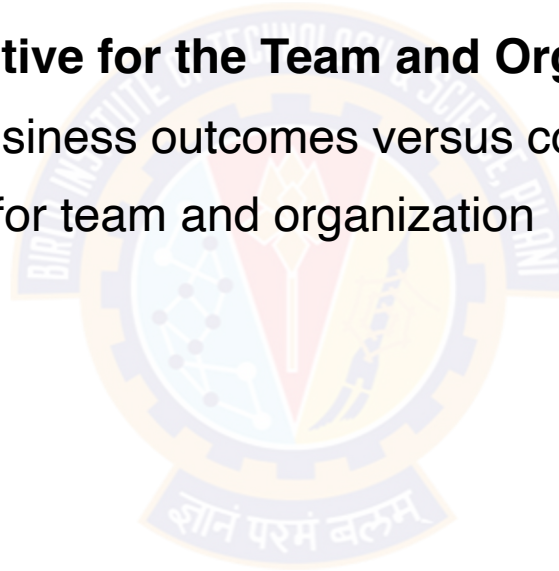
# DevOps – People

## Identifying Business Objective

- Getting everyone headed in the same direction
- And working toward the same goal

### **“Identify Common Business Objective for the Team and Organization”**

- Incent the entire team based on business outcomes versus conflicting team incentives
- Easy to measure progress of goal for team and organization

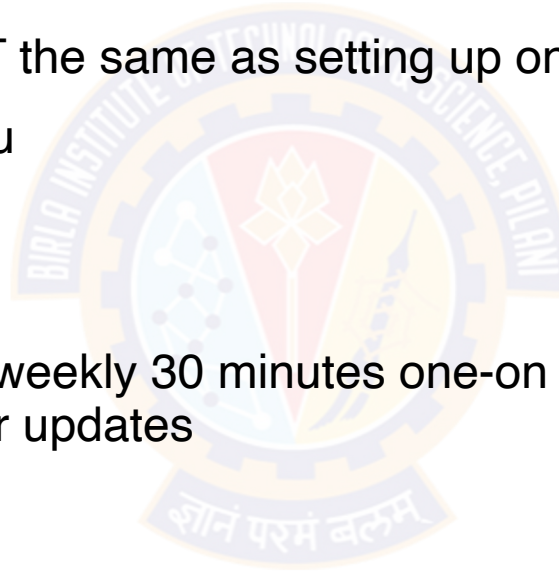


**DevOps isn't the goal. It helps you reach your goals**

# Effective Management of People

## One-On-Ones

- Regular one-on-one meetings with the people who report directly to you
- Don't be Anonymous
- Having an open-door policy is NOT the same as setting up one-on-ones
- Let feel people are important to you
- You are making time for them
- Best Practices : have weekly or bi weekly 30 minutes one-on –one, learn more about person, let them raise first and provide your updates
- Benefit to Manager?
- Benefit to Employee?





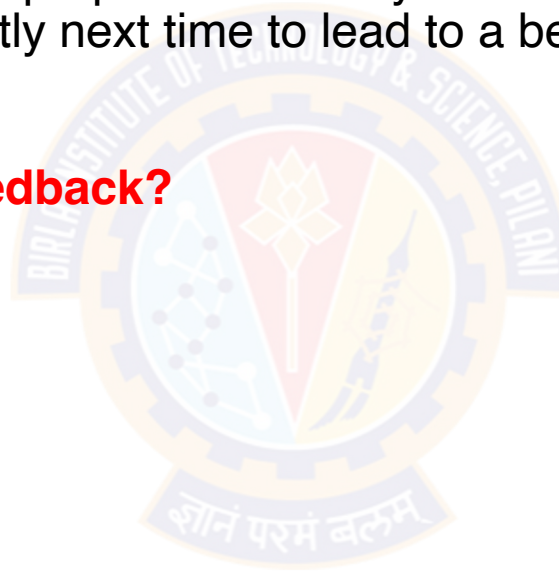
# Effective Management of People

## Feedback

- Everyone would like to get more feedback from his or her boss
- Dan Pink's mastery, autonomy, and purpose : “When you do x, y happens, which is not optimal. Can you find a way to do it differently next time to lead to a better outcome? “

### What You hear in your Feedback?

- Focus on feedback?



# Effective Management of People

## Delegation

- Feel on delegation of JOB to others?

**Managerial Economics 101**



# Effective Management of People

## Creating a Blameless Culture

- Who is being blamed?
- You will have to cover it without delegating the blame to the person in your team who is responsible
- The team will appreciate this
- The more you share with the rest of the organization the positive impact a member of your team has made, the better you will look too
- These two practices empower the people on your team to do the best job they can for you
- Whenever you have failures or problems, your root-cause analysis should not focus on who did what but on how we need to change the system so that the next person is able to avoid making the mistake again

# Effective Management of People

## Measuring Your Organizational Culture

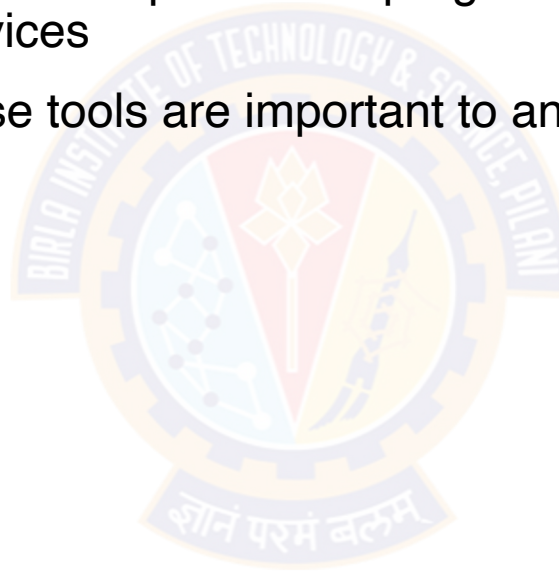
- There are a few different ways to measure culture
- The Westrum survey measures
  - On my team, information is actively sought
  - On my team, failures are learning opportunities, and messengers of them are not punished
  - On my team, responsibilities are shared
  - On my team, cross-functional collaboration is encouraged and rewarded
  - On my team, failure causes inquiry
  - On my team, new ideas are welcomed
- There are few more suggestions:
  - I would recommend the team to my friends as a good place to work
  - I have the tools and resources to do my role well
  - I rarely think about leaving this team or my company
  - My role makes good use of my skills and abilities

**Remember that advice stated before: you can only control your part of the organization**

# DevOps – Tools

## What is DevOps Tools:

- Tools can be used to improve and maintain various aspects of culture
- Software development tools help with the process of programming, documenting, testing, and fixing bugs in applications and services
- Not restricted to specific roles, these tools are important to anyone who works on software in some capacity
  - Local development environment,
  - Version control,
  - Artifact Management,
  - Automation and Monitoring



# DevOps Tools

## Local Development Environment

- A consistent local development environment is critical to quickly get employees started contributing to your product
- Don't Consider this as limitation:
  - This is not to say that individuals should be locked into a single standard editor with no flexibility or customization, but rather it means ensuring that they have the tools needed to get their jobs done effectively
- Minimal requirements may vary in your environment depending on individual preferences:
  - Multiple Displays
  - High-Resolution Displays
  - Specific Keyboards, Mice, and other Input Devices



# DevOps Tools

## Version Control

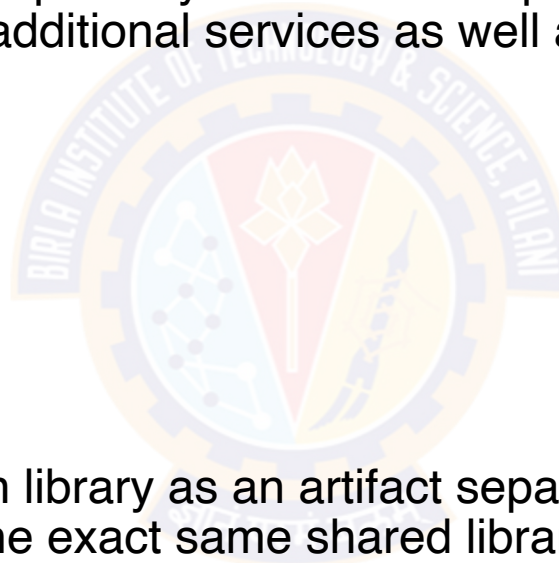
- Having the ability to commit, compare, merge, and restore past revisions of objects to the repository allows for richer cooperation and collaboration within and between teams
- Version control enables teams to deal with conflicts that result from having multiple people working on the same file or project at the same time, and provides a safe way to make changes and roll them back if necessary
- When choosing the appropriate version control system (VCS) for your environment, look for one that encourages the sort of collaboration in your organization that you want to see
  - Opening and forking repositories;
  - Contributing back to repositories;
  - Contributions to your own repositories;
  - Defining processes for contributing; and
  - Sharing commit rights



# DevOps Tools

## Artifact Management

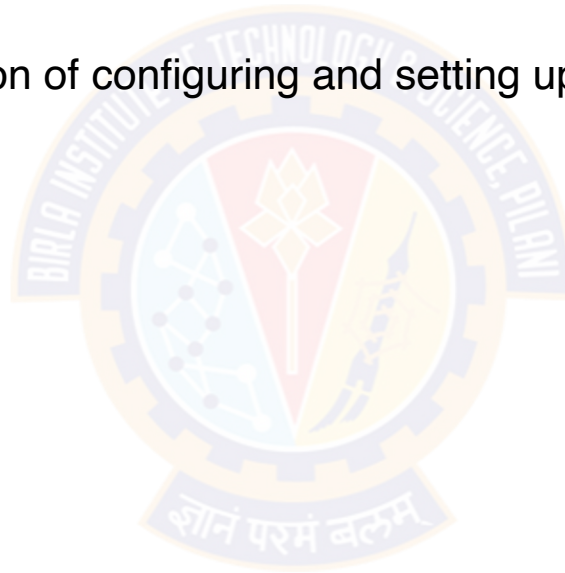
- An artifact is the output of any step in the software development process
- When choosing between a simple repository and more complex feature-full repository, understand the cost of supporting additional services as well as inherent security concerns
- An artifact repository should be:
  - Secure;
  - Trusted;
  - Stable;
  - Accessible; and
  - Versioned
- You can store a versioned common library as an artifact separate from your software version control, allowing all teams to use the exact same shared library



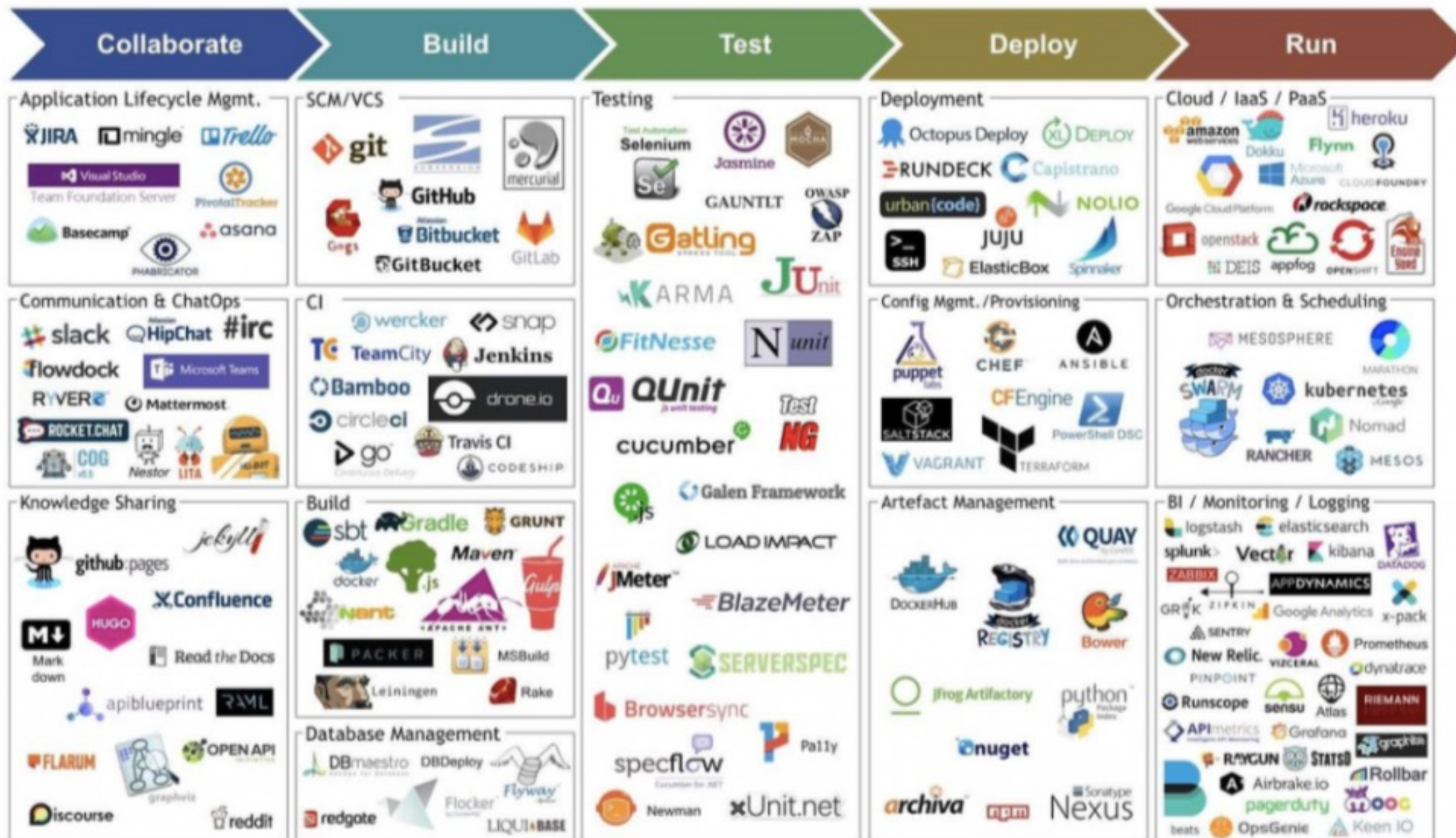
# DevOps Tools

## Other Automation Tools

- Automation tools reduce labor, energy, and/or materials used with a goal of improving quality, precision, and accuracy of outcomes
- Server Installation
  - Server installation is the automation of configuring and setting up individual servers
- Infrastructure Automation
  - Configuration Management
  - Capacity Management
- System Provisioning
- Test and Build Automation
  - On-demand automation
  - Scheduled automation
  - Triggered automation
  - Smoke testing
  - Regression testing
  - Usability testing



# DevOps Tools Ecosystem





# PERIODIC TABLE OF DEVOPS TOOLS (V2) (V1)

EMBED DOWNLOAD ADD

Os Open Source  
Fr Free  
Fm Freemium  
Pd Paid  
En Enterprise

SCM  
CI  
Deployment  
Cloud / IaaS / PaaS  
BI / Monitoring

Database Mgmt  
Repo Mgmt  
Config / Provisioning  
Release Mgmt  
Logging

Build  
Testing  
Containerization  
Collaboration  
Security

PERIODIC TABLE OF DEVOPS TOOLS (V2) (V1)										EMBED			DOWNLOAD			ADD			
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# Q&A



# Thank You!

In our next session: