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ALL DAY DEVOPS

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Software development with a lean mindset & DevOps

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The Problem

Delivery

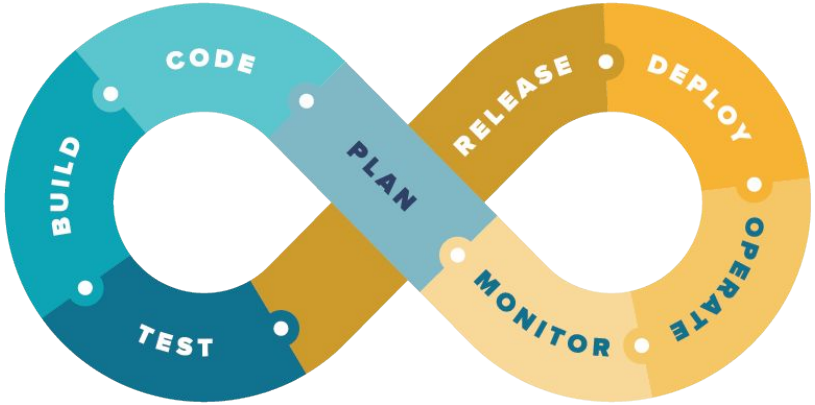
- Uncertainty about why projects are not finished on time.
- Teams working crunch time to complete the commitments.
- Lack of quality, no CI/CD, meaningful tests, poor automation.
- Lots of manual intervention during deployment phases.

Metrics

- No way to gather information about the status of the project.
- No way to improve due to the lack of information

“If you can’t measure it, you can’t improve it”

The Goal (DevOps culture + lean)



DevOps KPIs

- Lead time
- Deployment Frequency
- Mean Time to Restore
- Change failure Percentage

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The Goal (DevOps culture + lean)

DevOps as a Cultural Movement

- Hard
- Medium
- Easy

- Embrace DevOps for all engineering teams.
  - Make it part of your onboarding process
  - Education in areas such as automation, system operations, IaC, CI/CD
- Explain how the use of some tools help to achieve business objectives
  - Lean as a tool for improvement
  - Experimentation culture, Hypothesis validation and measurements
  - Automation

Implementing DevOps practices and tools can benefit your organization in:

- Faster time to market of the new releases
- Quick recovery from the project failures
- Continuous Integration and Delivery through robust deployment model
- Gather metrics that can be used as input and help in the decision-making process for a new iteration.

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The Goal (DevOps culture + lean)

DevOps as Cultural Movement

IN THIS NEWSLETTER

DevOps Madness is upon us and we're celebrating all the things that help engineering teams come out on top. Get a crash course in DevOps.

Why Engineering Teams Thrive in a DevOps Culture

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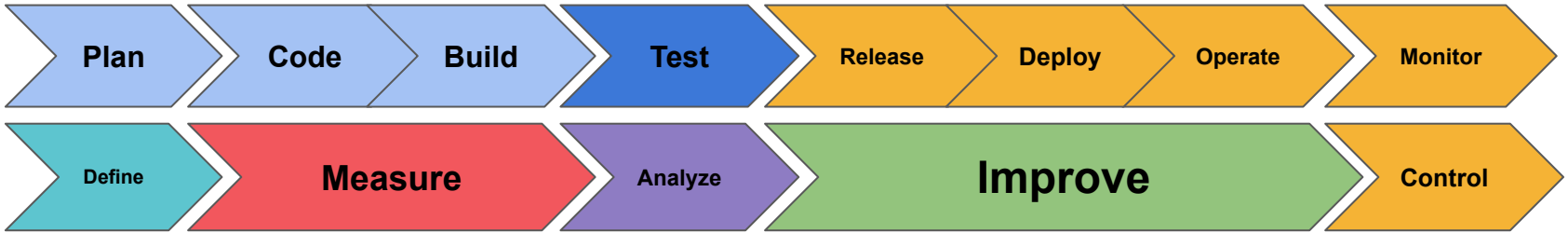
Our Approach

DevOps Principles



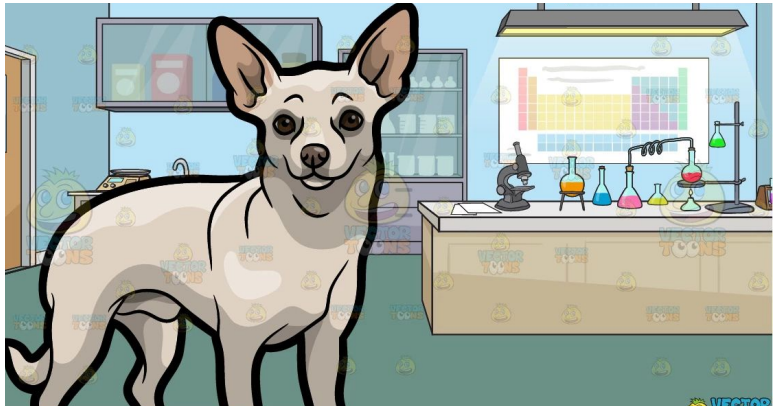
Lean Six Sigma Framework DMAIC

DevOps principles will be aligned with the Lean Six Sigma data-driven quality strategy for improving processes, DMAIC, in order to build a replicable set of steps for their application.

Our Approach

Experimentation

1. Select a team to Transform
    a. Pick a team willing to commit and thrive.
    b. Make sure everybody understands DevOps and Lean
2. Explain the 4 DevOps KPIs (from Accelerate book)
3. Understand where we are at
    a. Creating a “As Is” Process Map of the current development process
4. Understand what provides value and what not
    a. Create a Value Stream Map
5. Set a baseline for metrics and measure
6. Make improvements
7. Measure again and celebrate



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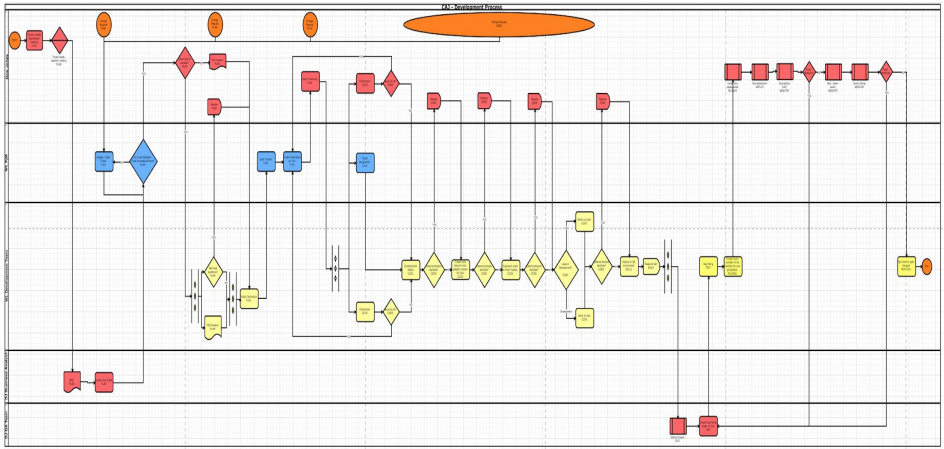
Our Methodology

Create a “As Is” Process Map

High-Level Steps for a Successful Process Map Creation

- Create the map of the current Software Development Cycle
  - Think as "From brain to production"
- Organizing a review meeting with an engineering team
- Brainstorming over the various aspects of software development life cycle
- Drawing the project workflow of different steps performed by the team
- Identifying the engineering streams with different color codes



Our Methodology

Create a “As Is” Process Map

Outcomes

- Define how things actually work
- Identify all current activities - inputs for our VSM
- Identify owners - decision makers
- Identify low-hanging fruits - quick improvements
- Have a visual representation of how we work (this is super valuable)

Findings

- After running these workshop with different teams, **all process maps looks completely different.**
- The interesting thing is that all teams are creating software.

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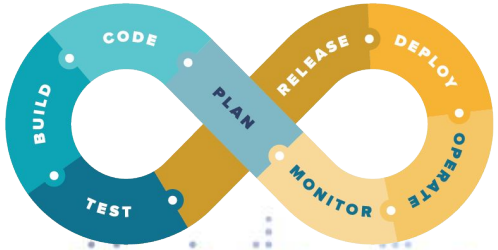
Our Methodology

Create a VSM (getting creative)

After a lot of reading and understanding how we could achieve this part. We are pretty sure that each step **of our SDLC is really the value chain in our VSM**. In essence these are the steps to create a VSM out of the process map.

1. Select all tasks related to each stage of the DevOps Value Stream (SDLC)
2. List all tasks in order inside a bucket of the value chain.
3. Identify the artifacts that should be used as input for the next steps
4. It's more likely that there will be no steps in the process related to certain areas such as monitoring, operation or deployment. (It's important to start digging further about this)



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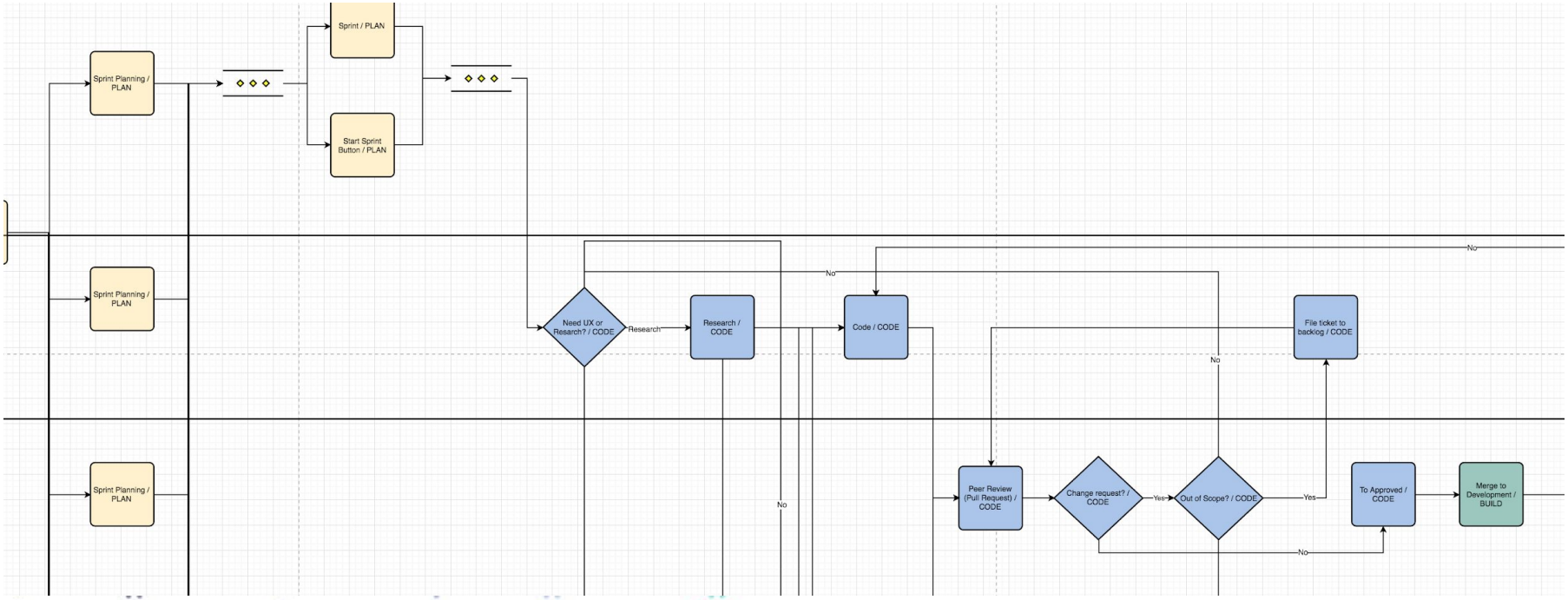
Our Methodology

Link all activities to the DevOps VSM



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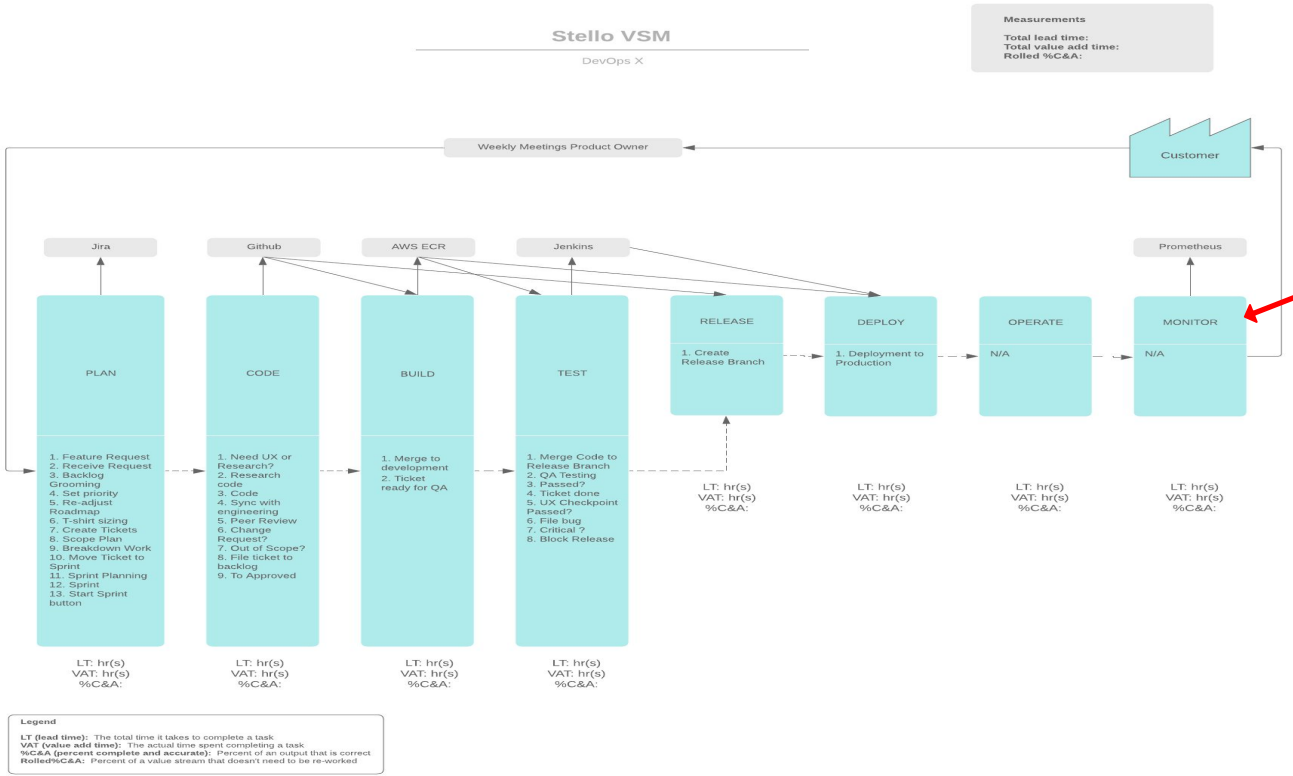
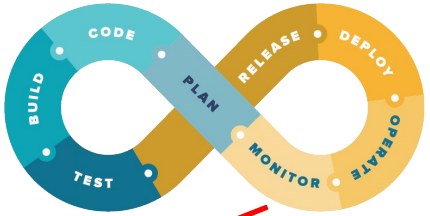
Our Methodology

Create a VSM (getting creative)





Our Methodology

Create a VSM (getting creative)

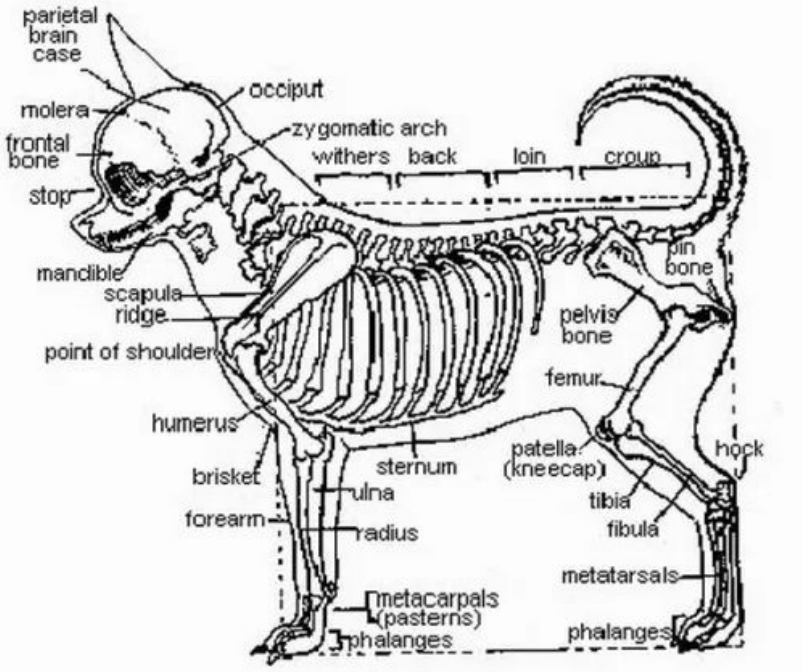
Outcomes

- Identify our value add activities - Improve them and reduce waste.
- Categorize these activities within the SDLC - Develop a software development standard for our future projects.
- Identify those activities that will become inputs for our 4 KPIs - Understand where our KPI come from.
- Generate a baseline for our metrics

To Do....

Next steps (in progress)

- Start implementing measurements with all the teams
- Every team can analyze their data
- Propose and execute improvements
- Measure again
- Identify improvements (if any) - repeat cycle



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Improvement Time

More experimentation

- Evaluate other approaches to reduce time and start with measurements right away.
    - Using UX approach
- Currently working in a new process "DevOps Sprint"

Thanks!

Backup Slides

Our Methodology

Create a “As Is” Process Map

Material Needed for the activity

- Color Post-its for defining the steps. (have at least 5 or 6 different colors)
- Markers for all participants. (so they can write on the post-its)
- Dot stickers, to identify owners. (have at least 5 or 6 different colors)
- A time timer (or just a timer or google timer)
- Colored tape. (painters tape)
- A whiteboard or 2, or a large window to stick the post-its

Who participates in the activity (preferred)

- A moderator. (2 are ok)
- Development team
- Project Managers
- Quality and Operations
- UX / Design team

Our Methodology

Create a “As Is” Process Map

Pre-Steps Recommendation (15 min)

1. **Break the ice:** Explain what's gonna happen in the workshop
2. **Discuss, Discuss, Discuss:** Create the process "as is", not how we want it to be
3. **Challenge each scenario:** If some things are not currently happening, step in, and get into an agreement

Note: Based in our experience 2 sessions of 90 minutes can provide enough information to create the current process map.

Our Methodology

Create a “As Is” Process Map

Start:

1. **Start labeling:** Use color codes for each type of work
2. **Maintain the flow:** Arrange post-it in sequence, add atomic steps, try to identify who perform the tasks and assign a color
3. **Make a workflow:** Connect post-its with arrows, using markers or tape.
4. **Assign Owners:** Paste the color dots to indicate the owners and their duties
5. **Revise the process map**: Take a poll and vote for each step for confirming its position and connection in the flow
6. **Raise voice**: If you find any redundancies or inaccuracies in the process flow, don’t hesitate to bring up to the table as it may have an impact on the process mapping
7. **Take a snapshot**: Take pictures of the flow and share them within the team

Our Methodology

Create a “As Is” Process Map

Post Steps

1. **Create a digital version of the map:** draw.io for such
2. **Identify each step as part of the DevOps VSM:** Each step in the process must belong to a single stage of the SDLC (devops infinite)
3. **Reunite the team:** Re-review the process, step by step and confirm with the team to have a process map "as is"
4. **Tweak the process map:** if it's needed make the appropriate changes to the process map and re-send for confirmation

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Our Methodology

In order to create a process map and a Value Stream Map

- Schedule 1 or 2 meetings with your team to map your process
  - 90 minutes
  - Include all team members, (PjM, QA, Dev, Ops, Product Owners)
  - If you are running these sessions with remote attendees, use a camera or try to use mural.co
- Create a digital version of the map (use draw.io, lucidchart or any other tool)
- Reunite with the team to validate the process map
  - Ask them to change or adjust if it's necessary
- Work with the final version of the process map and identify actions to the DevOps VSM (plan, code, build, test, etc)
- Create a new VSM using the different stages of the DevOps VSM
- Use the Process Map to add all the tasks identified on each stage to your VSM
- Identify the systems used in transitions of the value chain as outputs and inputs
- Measure each step and identify if the task adds value or is just an enabler