





An open-source event protocol for CI/CD pipelines

Why? What? Future?




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 *e-backmark-ericsson*

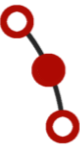


Valencia, May 17th, 2022


Agenda



Eiffel – Why?

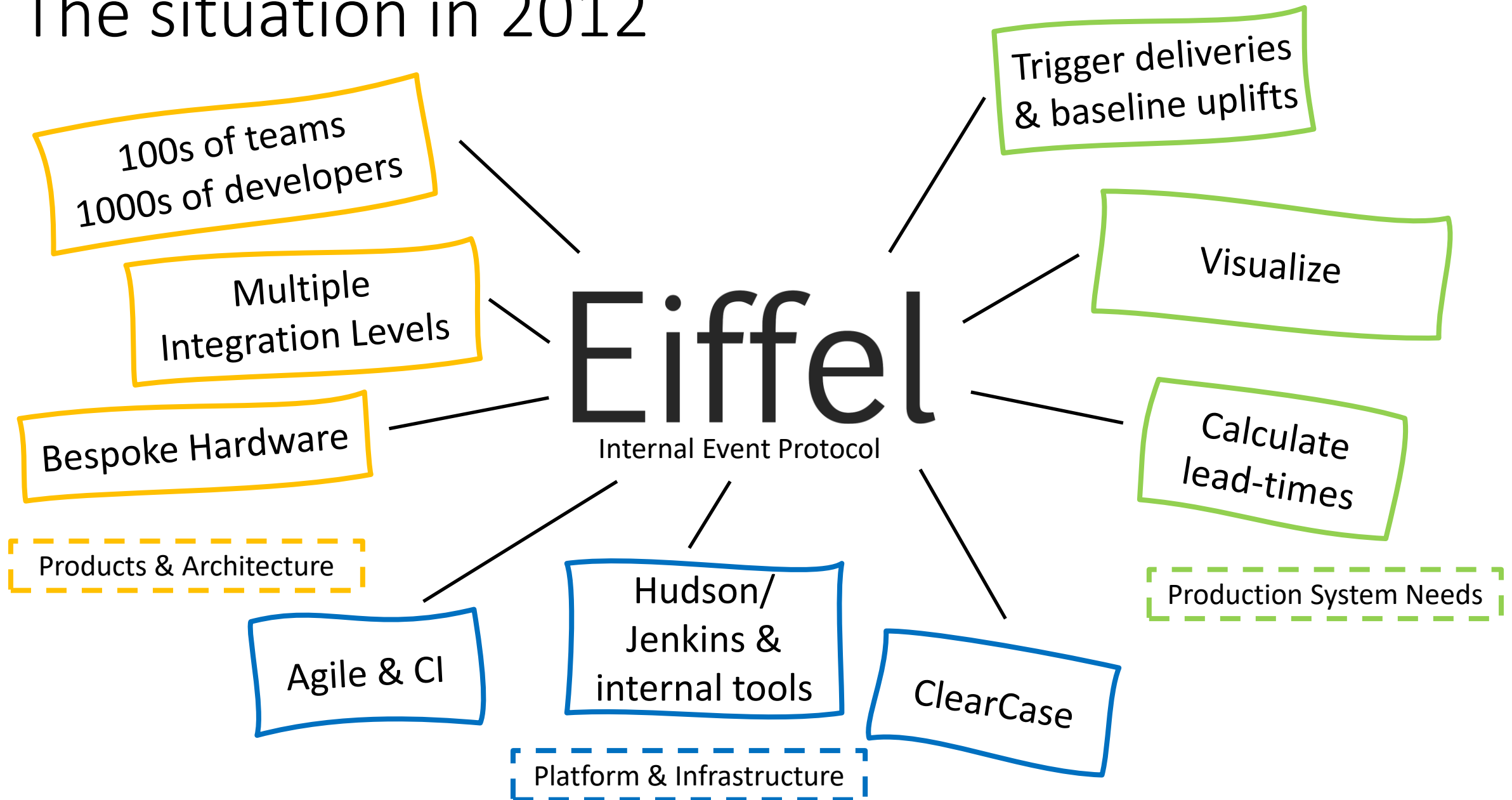


Eiffel – What?

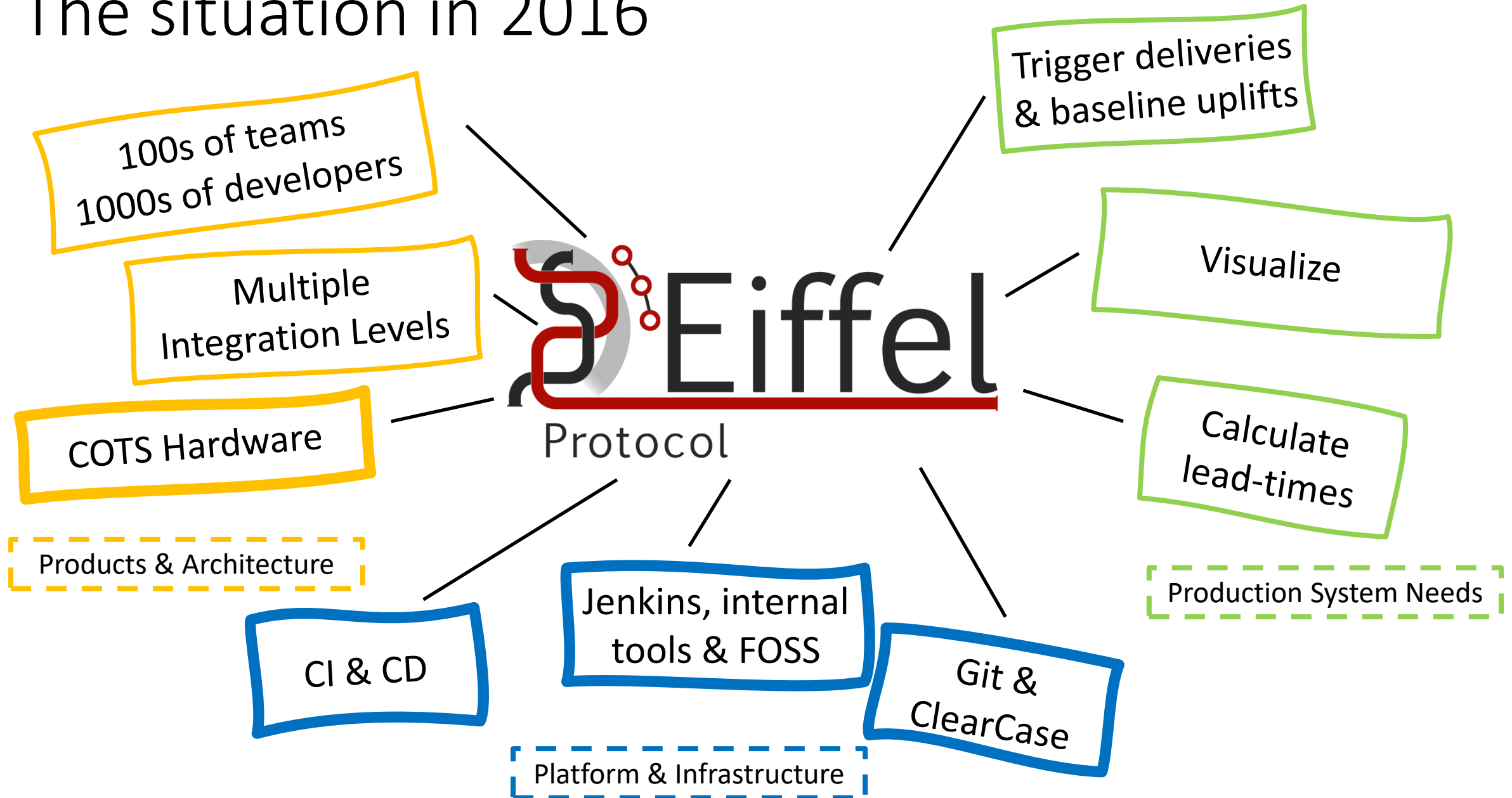


Eiffel – The Future?

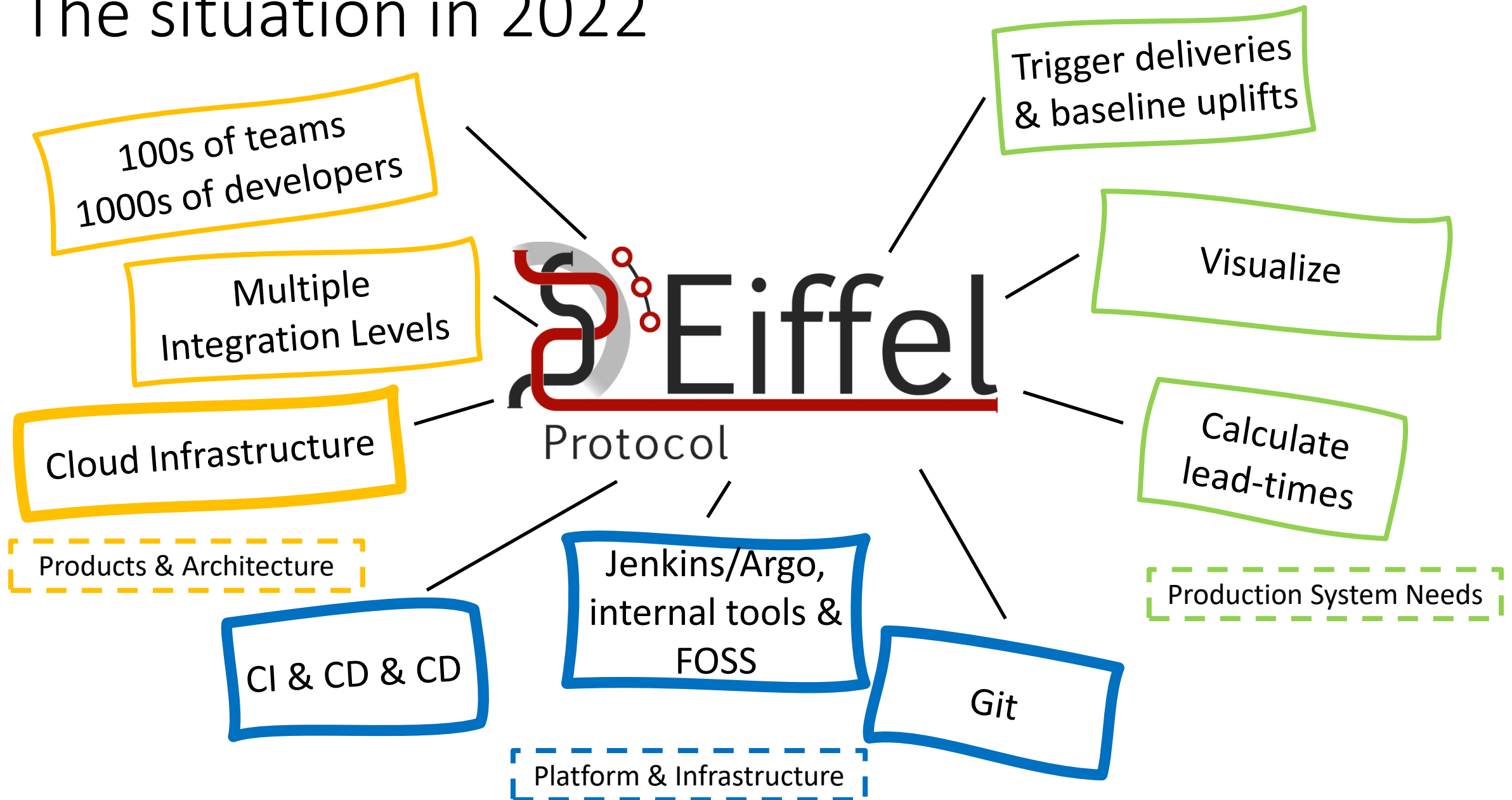
The situation in 2012



The situation in 2016




The situation in 2022





- what is it then?


Eiffel Community



Eiffel Community
<https://eiffel-community.github.io/> eiffel-community@googlegroups.com

[Overview](#) [Repositories 44](#) [Projects 3](#) [Packages](#) [Teams 24](#) [People 54](#) [Settings](#)

README.md




Eiffel Protocol

The Eiffel protocol enables technology agnostic communication for CI/CD eco systems. Eiffel is based on the concept of decentralized real time messaging providing traceability and KPIs throughout your pipelines, across platforms.


Learn more at <https://eiffel-community.github.io/>

Pinned

 **eiffel** Public


The Eiffel framework vocabulary, descriptions, guides and schemas along with links to relevant implementation repositories.

Python 101 58

 **eiffel-sepia** Public


Sepia Eiffel Protocol Implementation Architecture

2 5

 **eiffel-easy2use** Public

A sandbox to be used to try out the Eiffel protocol and related services

Shell 5 17

 **community** Public

Community guidelines such as governance, how to contribute, code of conduct, etc

4 14

Repositories

Type


Language

Sort

New

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People



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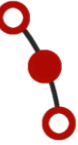
Top languages

Java Python JavaScript Go Gherkin

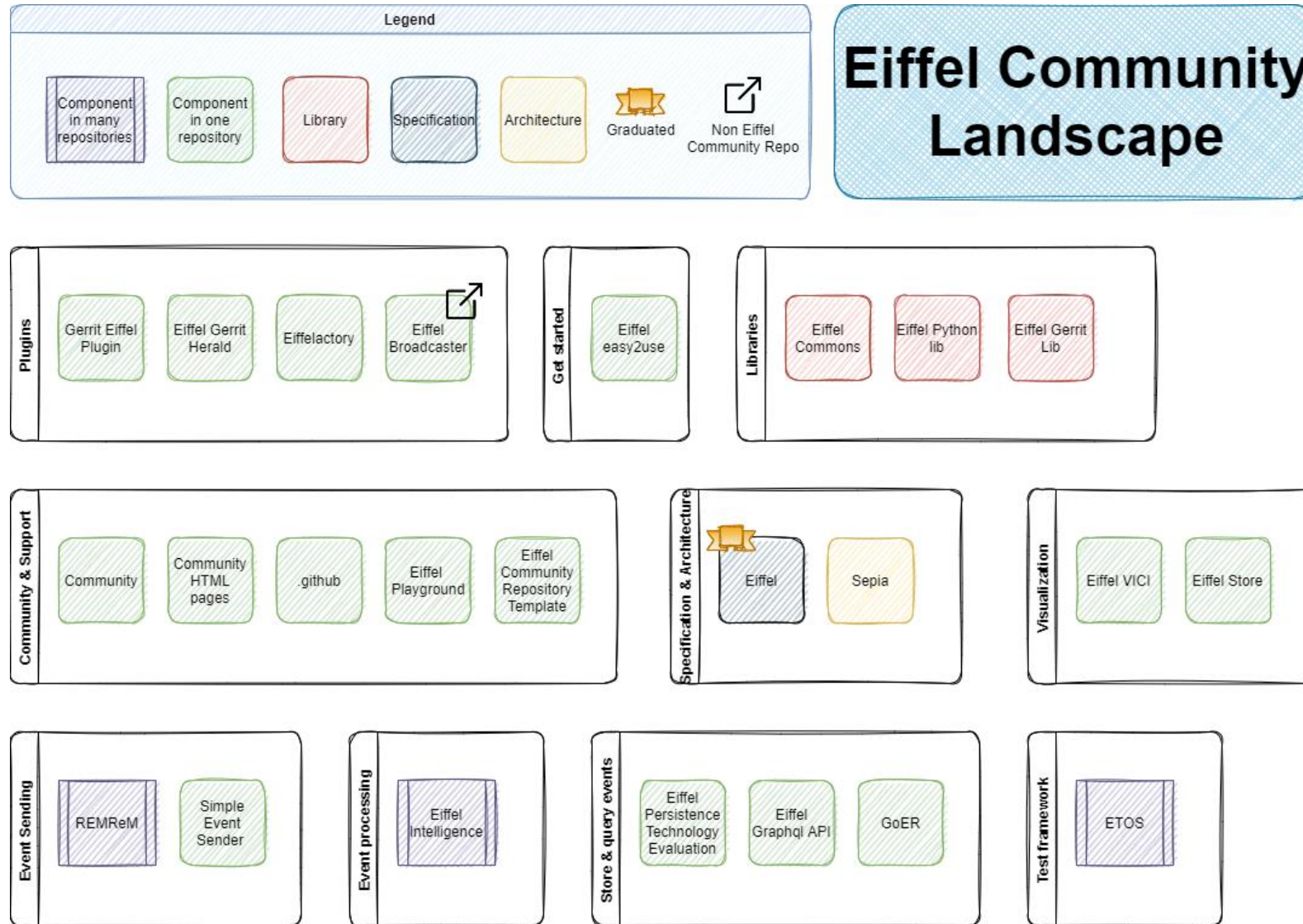
Most used topics

hacktoberfest etos remrem community event-sender

[Manage](#)



Eiffel Community Landscape





Event Types

- **Test** related events
- **Source Code** related events
- **Activity** related events
- **Artifact** related events
- and more

● Test Case Triggered

● Test Case Canceled

● Test Case Started

● Test Case Finished

● Test Suite Started

● Test Suite Finished

● Issue Defined

● Issue Verified

● Test Execution Recipe

Collection Created

● Source Change Created

● Source Change Submitted

● Composition Defined

● Activity Triggered

● Activity Canceled

● Activity Started

● Activity Finished

● Artifact Created

● Artifact Published

● Artifact Reused

● Confidence Level Modified

● Environment Defined

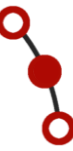
● Flow Context Defined

● Announcement Published

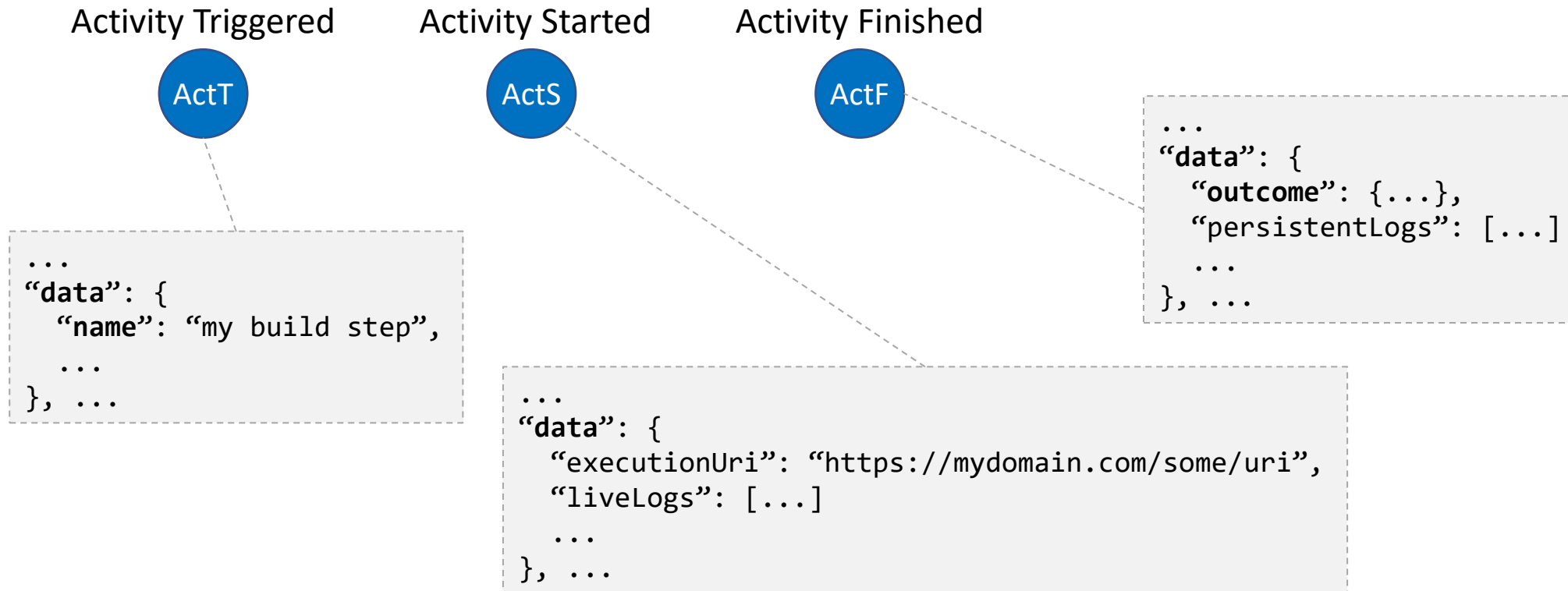
Event Syntax

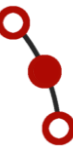
```
{
  "meta": {
    "id": "deadbeef-fefa-5432-1234-feefaafeefaa",
    "type": "EiffelActivityStartedEvent",
    "version": 4.1.0,
    "time": 1652205310
  },
  "data": {},
  "links": [
    {
      "type": "ACTIVITY_EXECUTION",
      "target": "aaaaaaaa-001d-5ccc-8ddd-eeeeeeeeeeee1"
    }
  ]
}
```

```
{
  "meta": {
    "id": "deadbeef-fefa-5432-1234-feefaafeefaa",
    "type": "EiffelActivityStartedEvent",
    "version": 4.1.0,
    "time": 1652205310,
    "source": {
      "name": "My workflow engine",
      "uri": "https://my.engine/svc/active"
    }
  },
  "data": {
    "executionUri": "https://my.builder/myJob/43",
    "liveLogs": [
      {
        "name": "My build log",
        "mediaType": "text/plain",
        "tags": [ "plain" ],
        "uri": "file:///tmp/logs/data.log"
      }
    ]
  },
  "links": [
    {
      "type": "ACTIVITY_EXECUTION",
      "target": "aaaaaaaa-001d-5ccc-8ddd-eeeeeeeeeeee1"
    },
    {
      "type": "PREVIOUS_ACTIVITY_EXECUTION",
      "target": "aaaaaaaa-001d-5ccc-8ddd-eeeeeeeeeeee0"
    }
  ]
}
```

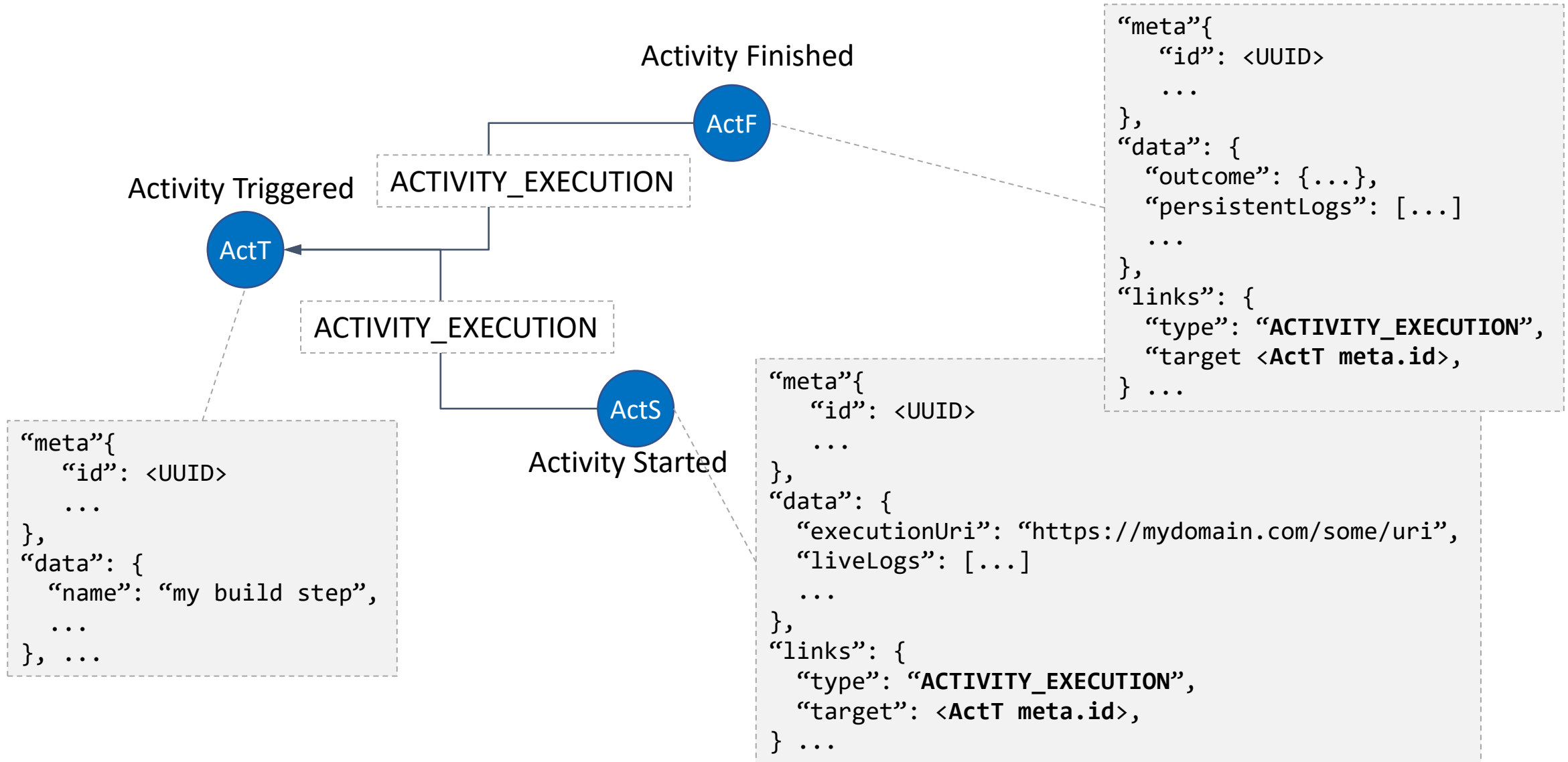


Activity Related Events

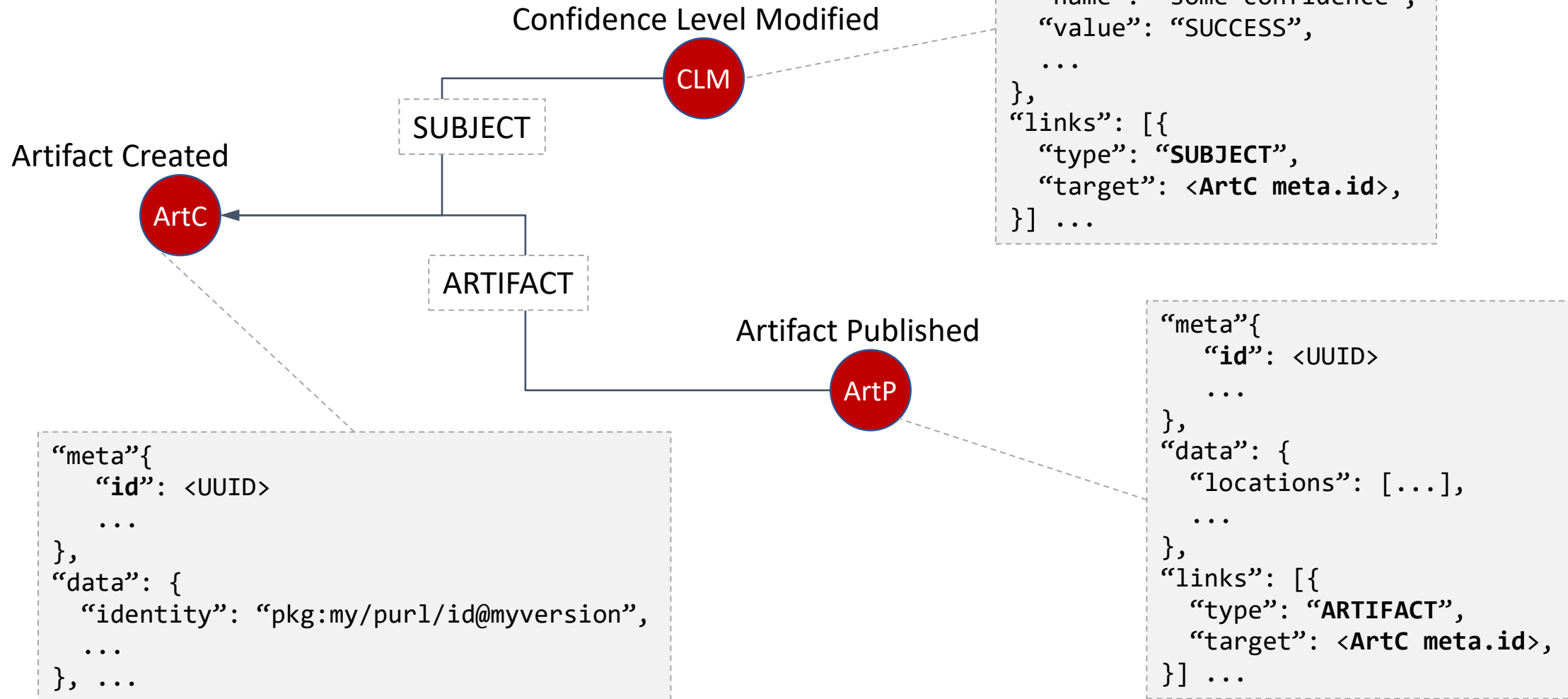


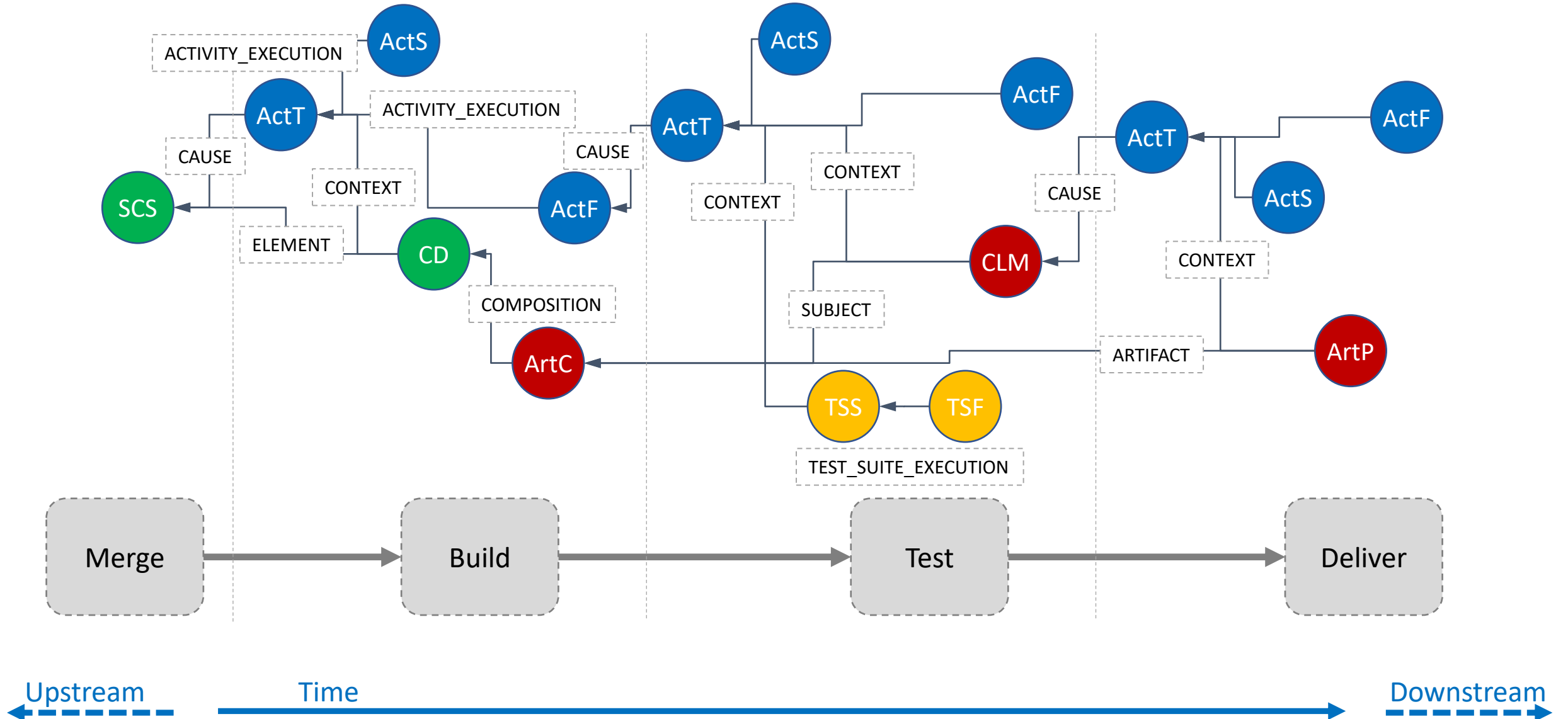


Activity Related Events – with links



Artifact Related Events





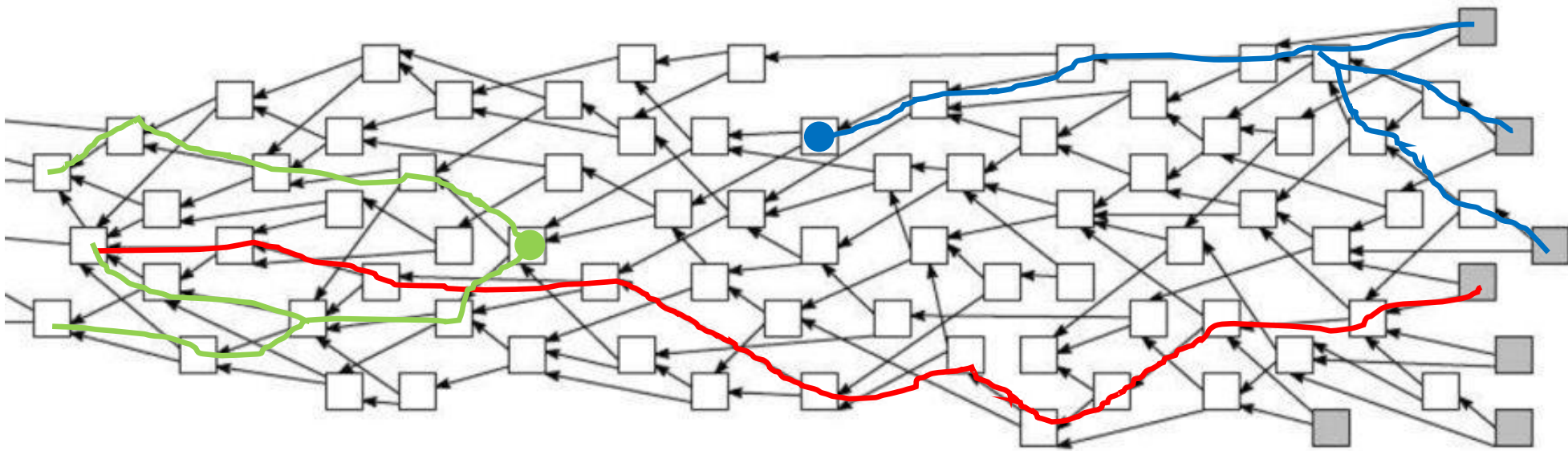
Linking Events – Traceability



Trace upstream
to find sources

Trace events end-to-end

Trace downstream
to find deployments



Upstream

Time

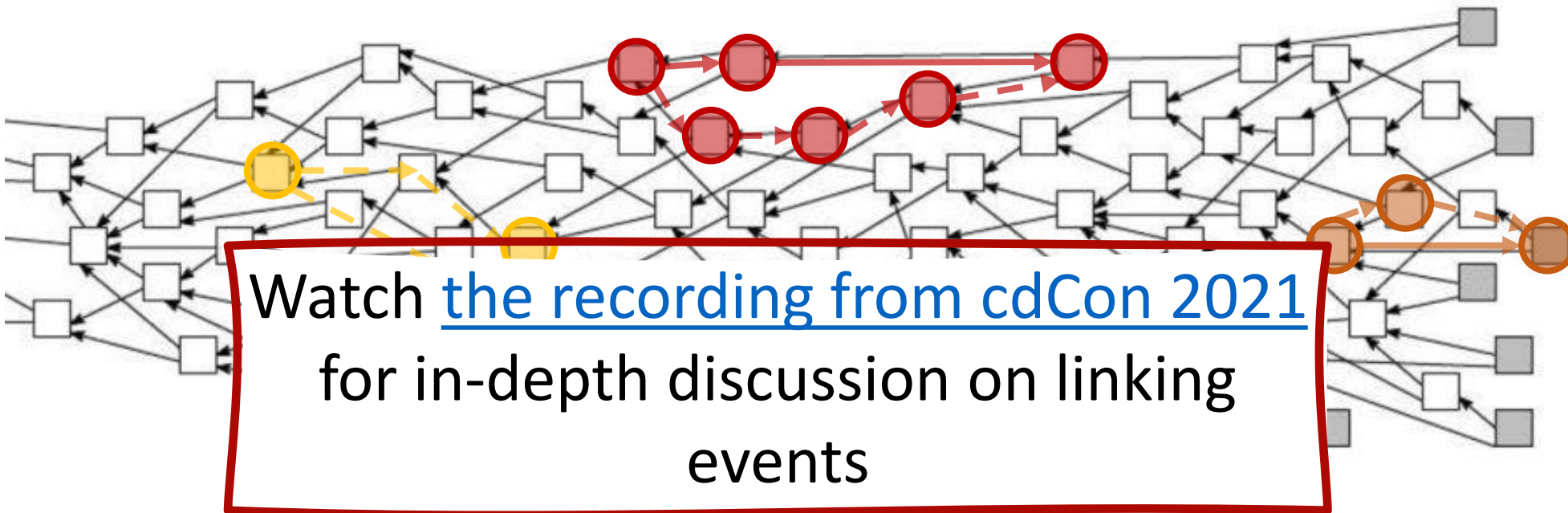
Downstream

Linking Events – Data Aggregation

Perform Analytics over
Multiple Organizations

Calculate KPIs Generically

Trigger Pipeline Activities
on Complex States

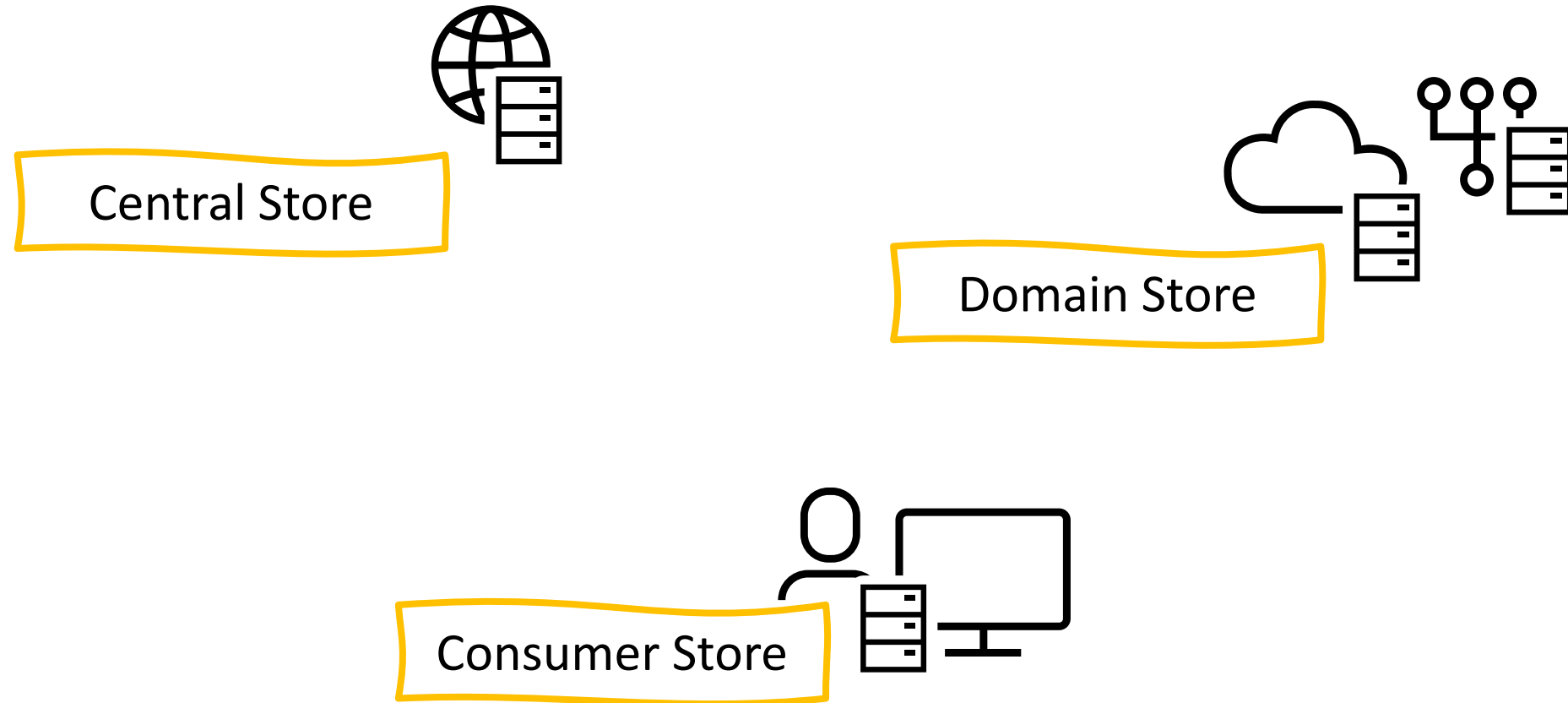


Upstream

Time

Downstream

What about Storing Events?



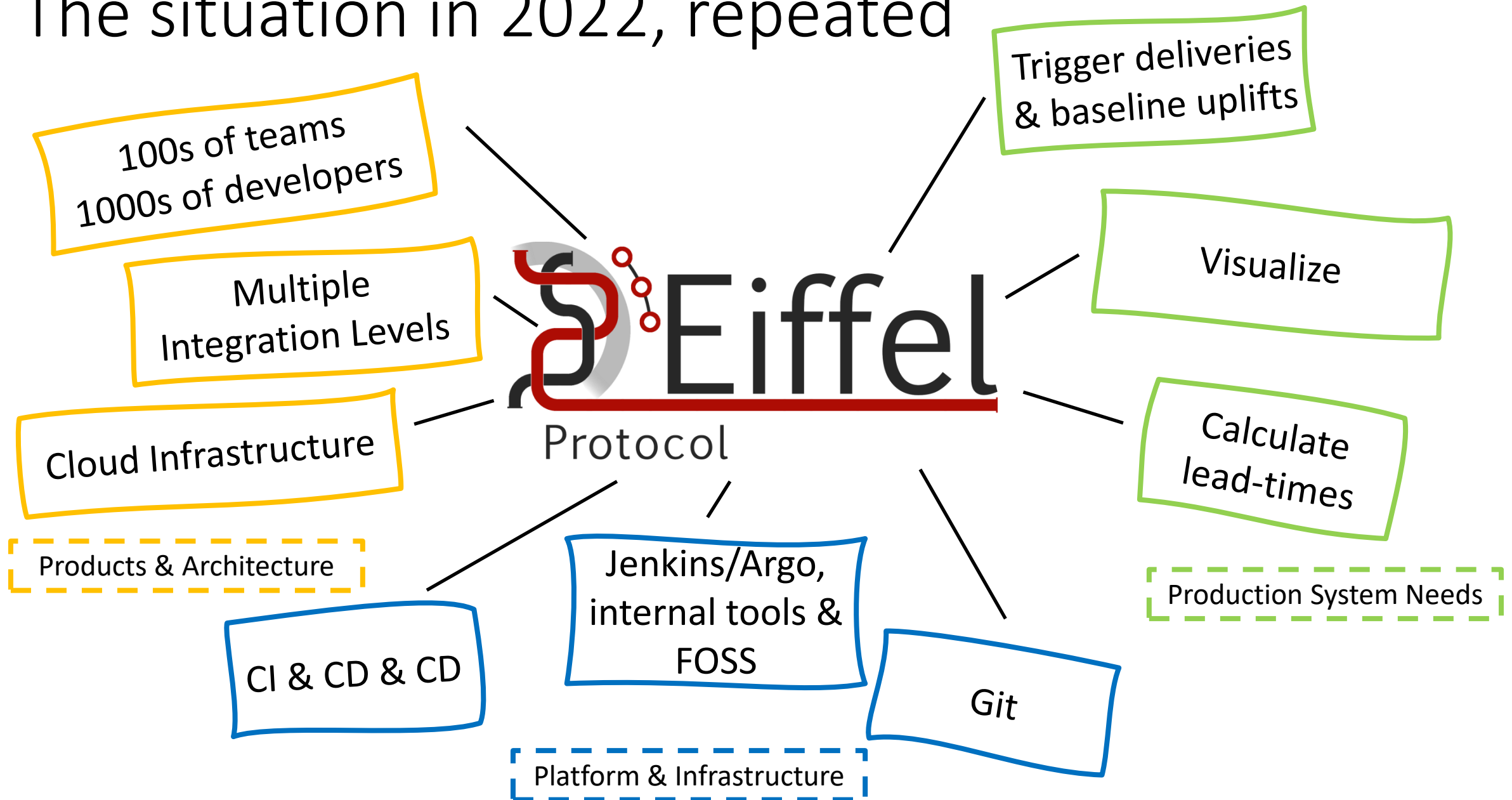
Who is using Eiffel?



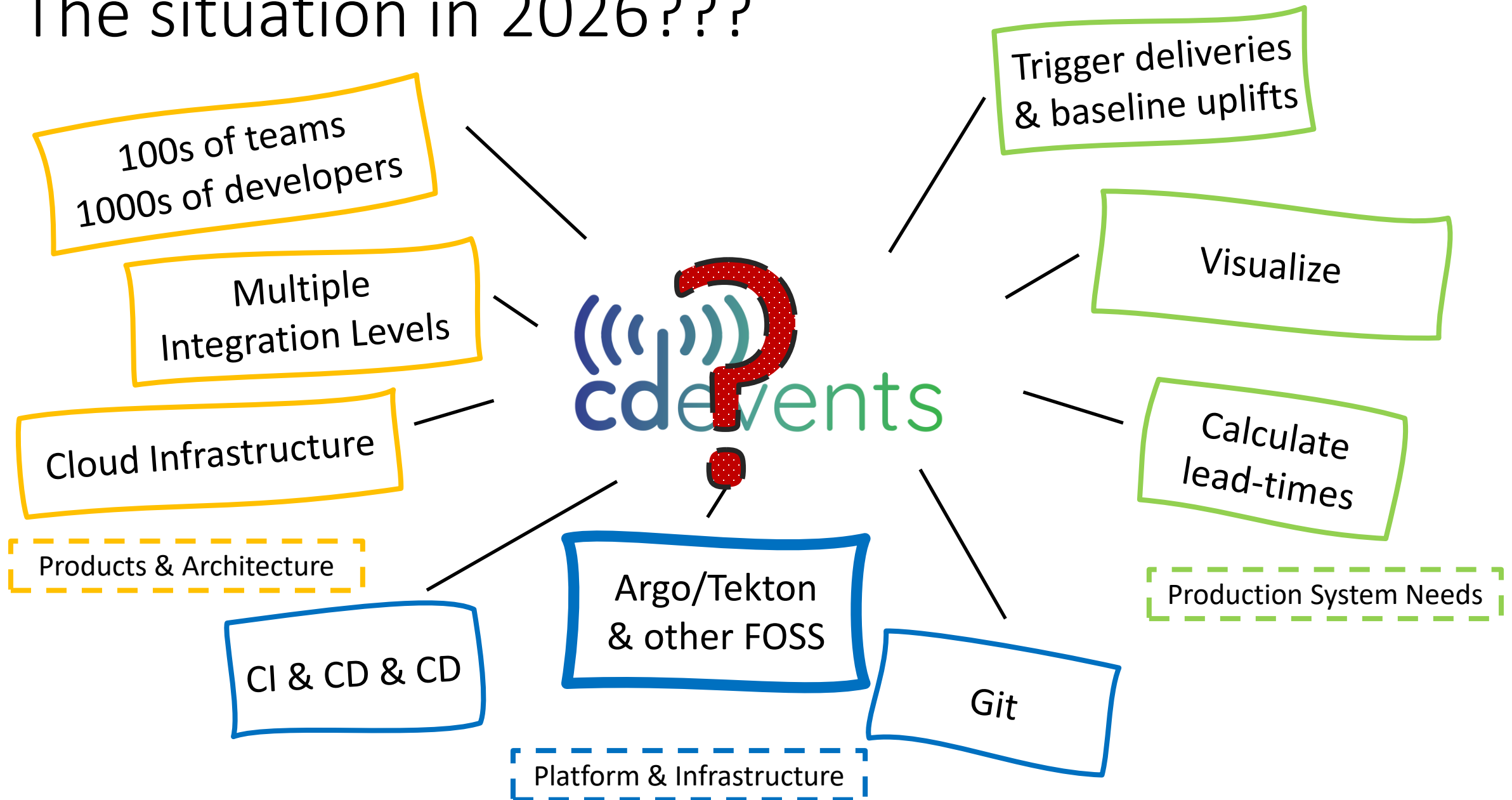


- what about the future?

The situation in 2022, repeated



The situation in 2026???





Experience on Eiffel brought to

- Build community early
- Build eco-system with PoCs and SDKs early
- Getting started
- Syntax rules
- Consider generalness vs specificness
- Combine current CI/CD paradigms with research & architecture
- Focus on documentation before features
- Use existing events infrastructure framework



Useful links

- The protocol – [Eiffel @ GitHub](#)
- The community – [Eiffel Community @ GitHub.io](#)
- Try it for yourself – [Eiffel Easy2Use](#)
- Quick intro (YouTube video) – [What is Eiffel and why should I care?](#)
 - More in-depth videos are also available on the same YouTube channel



What to communicate
is volitional;

How to communicate it
is not



eiffel-community.github.io