

The State of OpenTelemetry

A background image of a night sky filled with stars and the Milky Way galaxy. In the lower right foreground, a black telescope is mounted on a yellow and black tripod, pointing towards the upper left.

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**How many tools do
companies use to
collect telemetry data?**




OpenTelemetry





Dotan Horovits

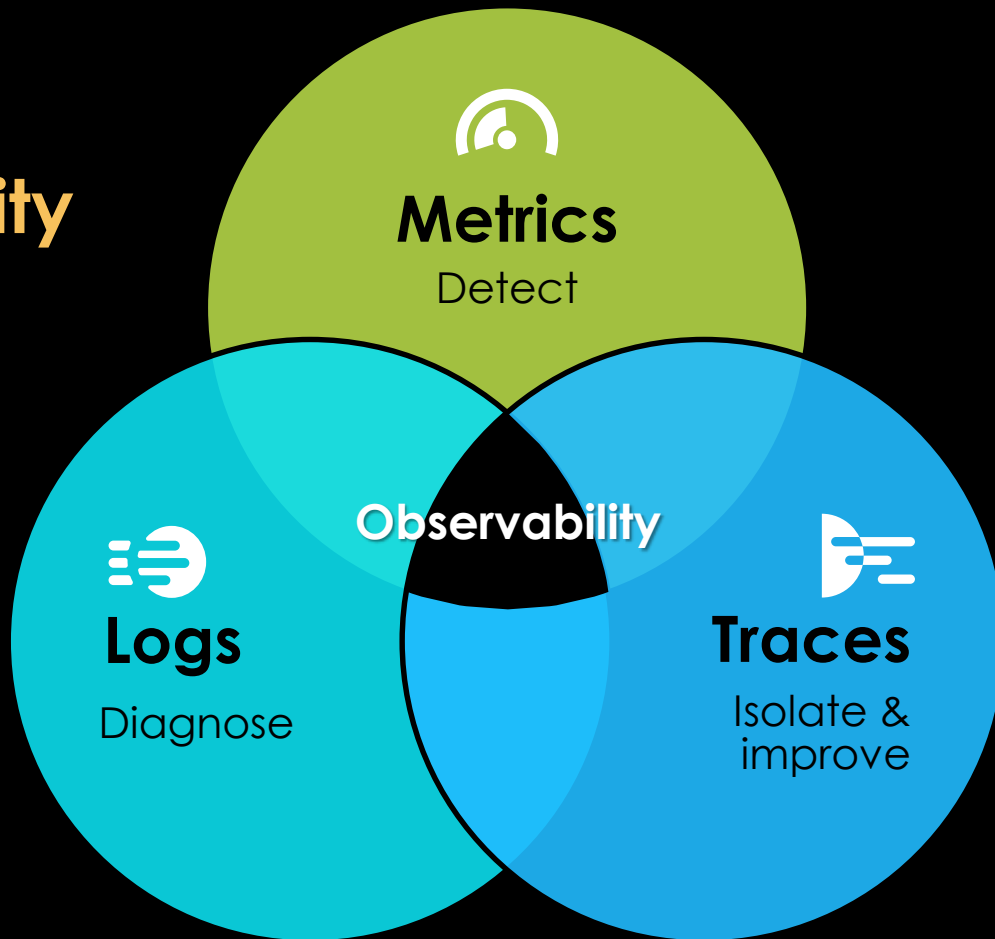
@horovits

- Developer Advocate at  logz.io
- 20 years in the hi-tech industry
- Developer, architect, product
- CNCF advocate, meetup organizer
- OpenObservability Talks podcast



Devops
Dozen

The vision: unified observability



The reality: fragmented instrumentation



OpenTelemetry (a.k.a. OTel)

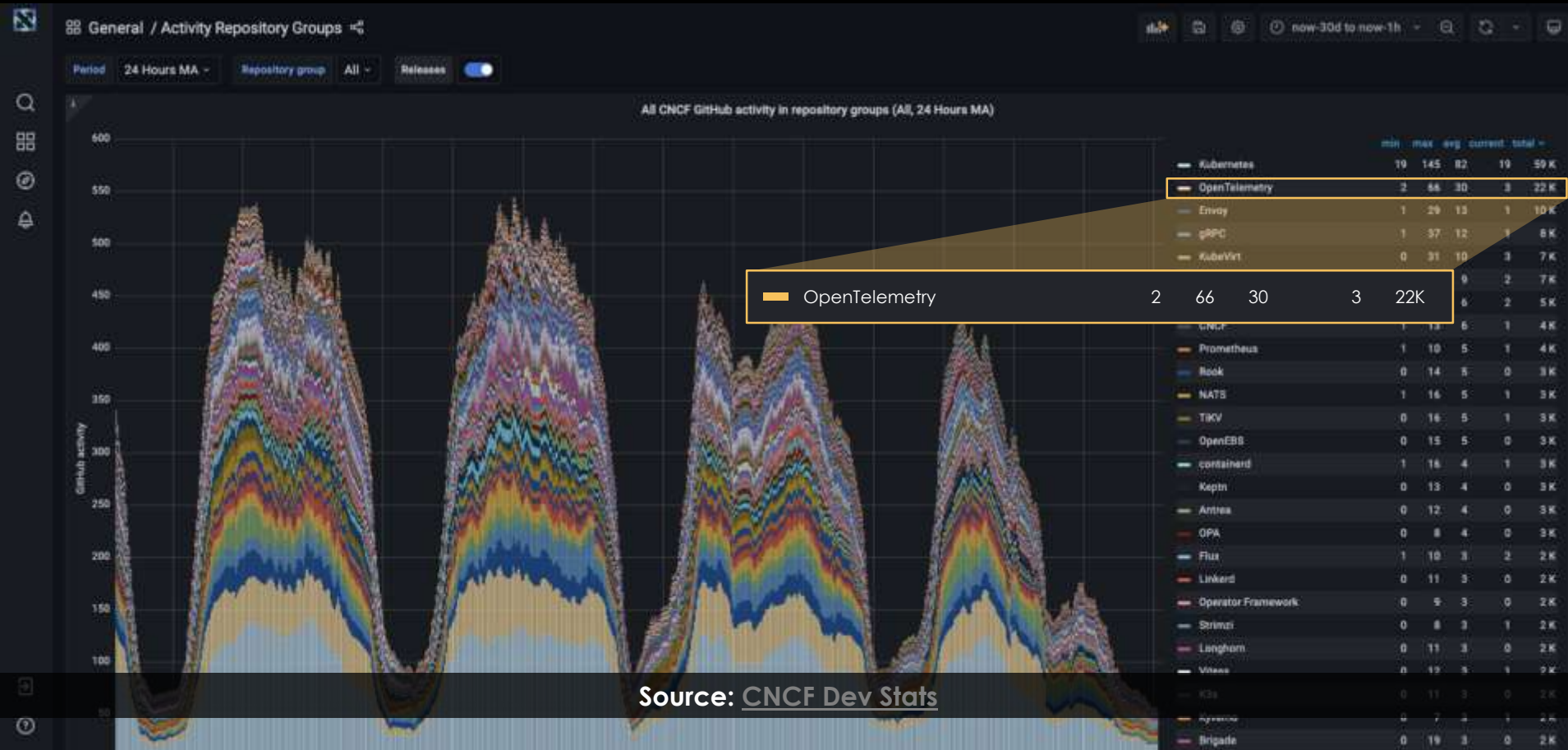


“OpenTelemetry is an observability framework – software and tools that assist in **generating and capturing telemetry data** from cloud-native software.”

Across Traces, Metrics, Logs

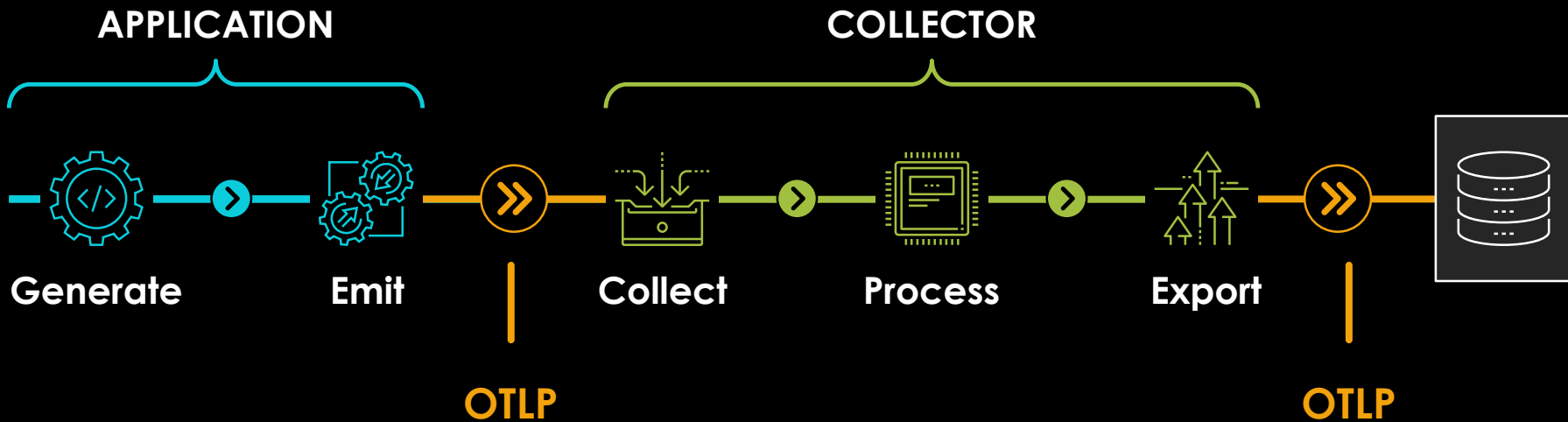


Second most active CNCF project

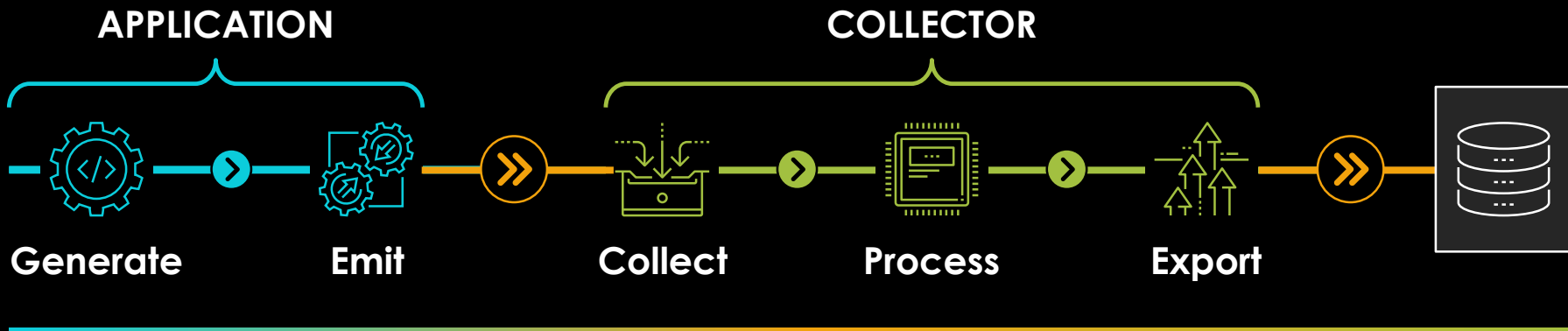


OpenTelemetry

A unified set of vendor-agnostic APIs, SDKs and tools for generating and collecting telemetry data, and then exporting it to a variety of analysis tools.



OpenTelemetry Specification

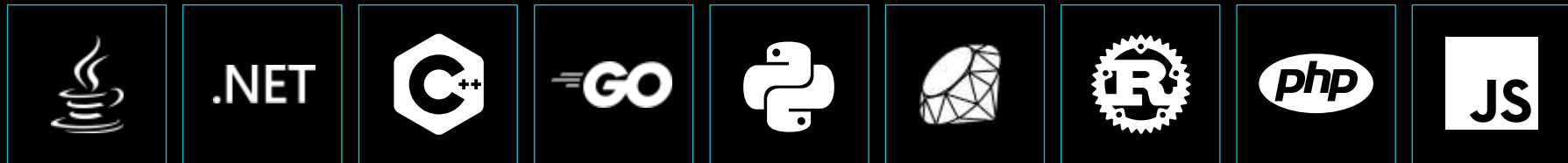
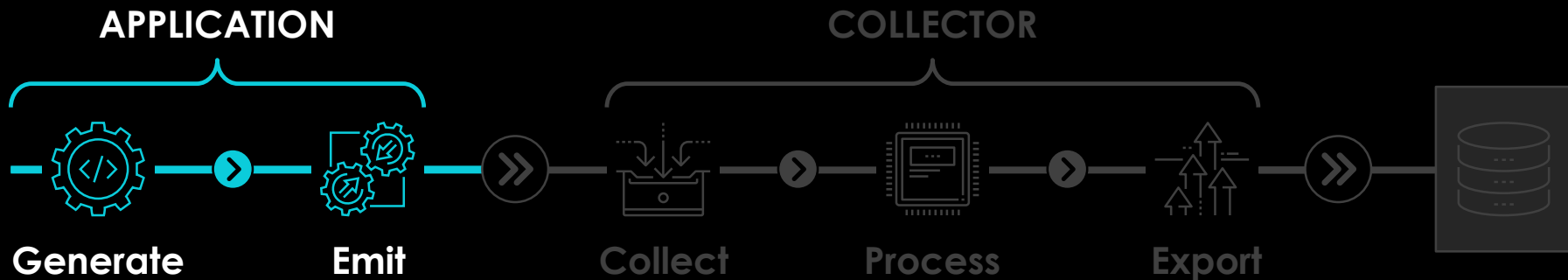


**Cross-language requirements for all
OpenTelemetry implementations**

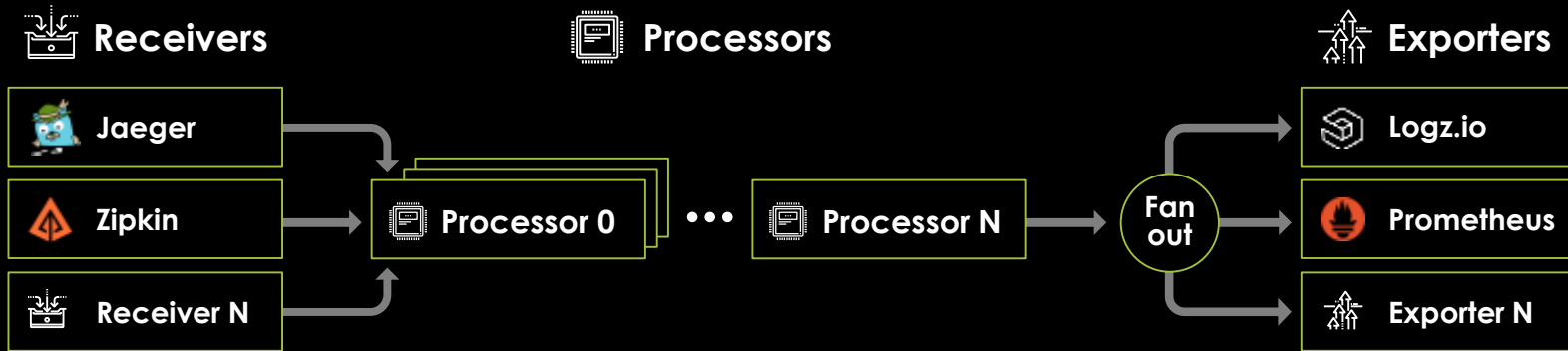
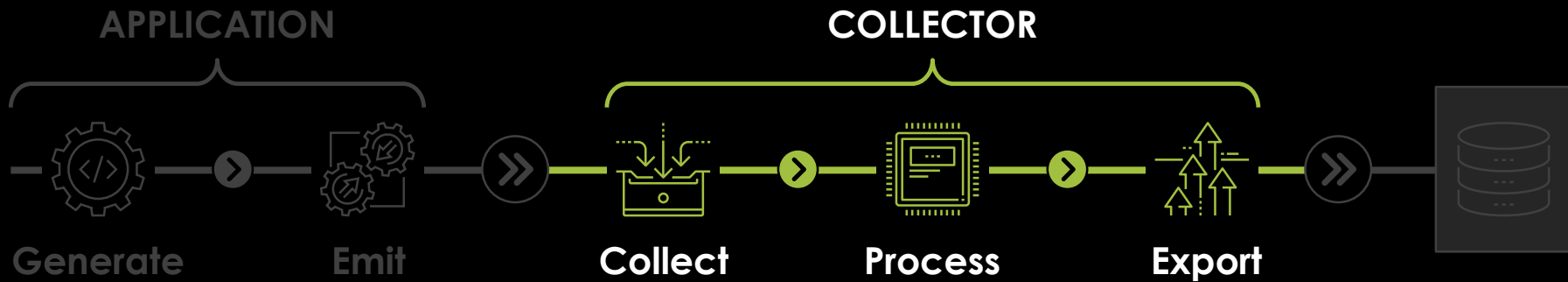
API specification | SDK specification | Data specification

For traces, metrics and logs

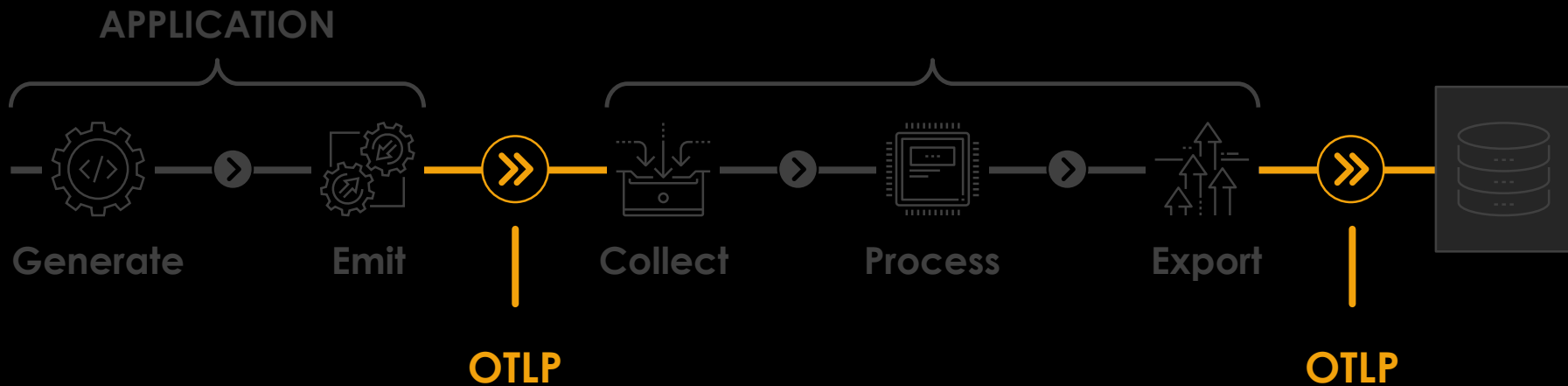
OpenTelemetry Client Libraries



OpenTelemetry Collector



OpenTelemetry Protocol (OTLP)



Transport: grpc and HTTP 1.1 | Encoding: protobuf | Telemetry data model

Is OpenTelemetry GA?

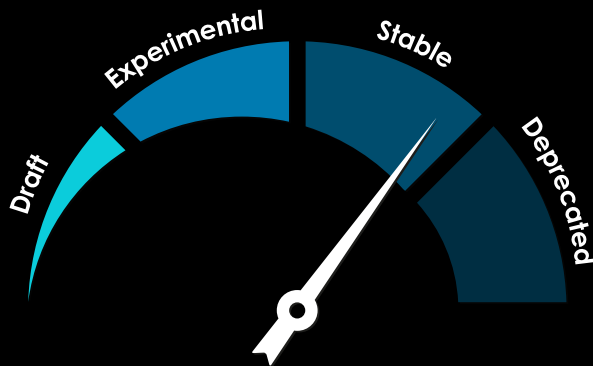
☒ YES

☐ NO

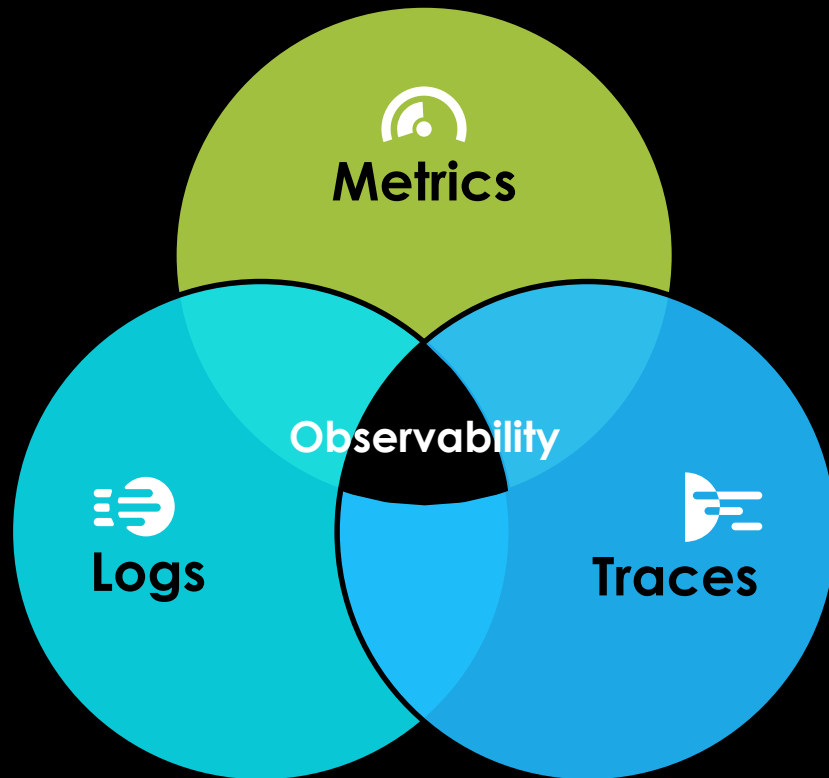
☒ IT DEPENDS ✓

Status for...

	Metrics	Tracing	Logging	
Collector	C++	.Net	API	Protocol
Receivers		GoLang		Java
Exporters		SDK		



State of the signals



State of the signals

Stable

(i.e. GA)



- API, SDK, Protocol, Collector are stable
- Client libraries >v1.0 for Java, Go, .Net, Python, C++, JavaScript
- Working on Ruby, PHP, Erlang
- Long-term support, backwards compatibility, and dependency isolation

Expecting stability

by end of 2021



- Protocol and API Are stable
- SDK is in feature freeze (soon Stable)
- Prototyped in Java, .NET, and Python
- Collector is still Experimental, incl. Prometheus support

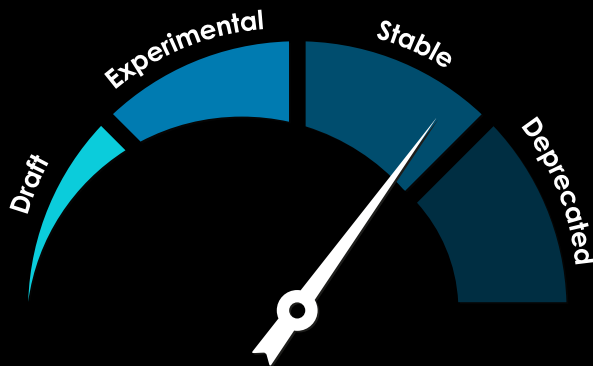
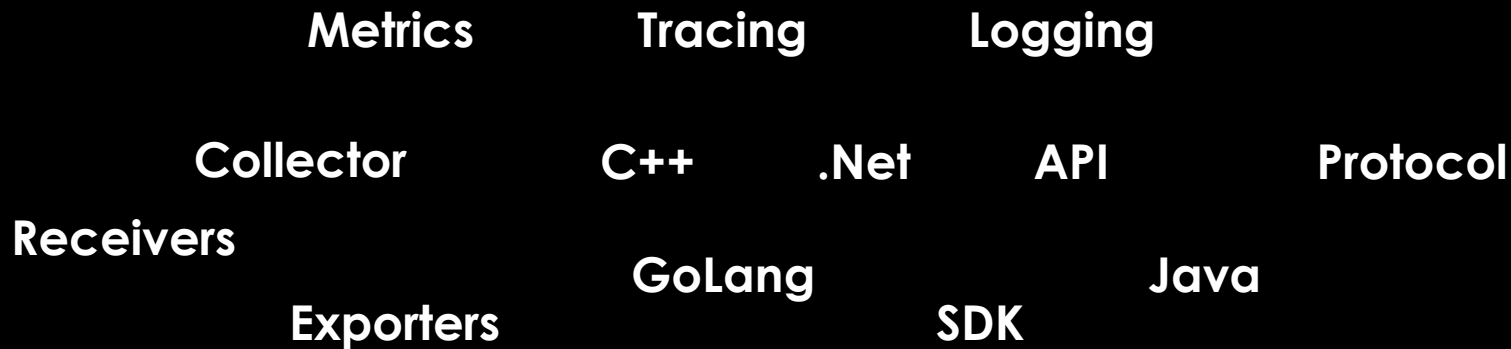
Experimental

(some specs still in draft)



- Protocol and Collector are experimental
- API, SDK are in draft stage
- Focusing first on integration with existing logging systems
- Log appenders are under development in many languages

How do I get started with OpenTelemetry?



Know your stack



**Which
languages?**



**Which
signals?**



**Which
protocols?**



**Which
analytics tools?**

Then check status for each and follow respective guides

<https://opentelemetry.io/status/>

The image shows a tablet with a dark blue background. On the screen, there is a yellow semi-circle at the top left, a blue circle on the left, and a yellow crescent on the right. The text "GUIDE TO OPENTELEMETRY" is centered in yellow. Below it is the OpenTelemetry logo, which consists of a white stylized rocket or telescope icon and the text "OpenTelemetry". At the bottom of the screen, there is a yellow-bordered box containing white text. To the right of the tablet is a white stylus.

GUIDE TO OPENTELEMETRY



Google "**OpenTelemetry Guide**", or go to:
<https://logz.io/learn/opentelemetry-guide/>

Thank you!

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