Open Source is essential to technology innovation

Jim Zemlin, Executive Director, Linux Foundation

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Open source is one of the most successful enablers of global innovation in history

Open means open:

› **Open source can originate anywhere**

  › In dorm room in Finland: Linux

  › In a University in the US: Apache

  › In the world's largest telco in China: ONAP (Open-O)

› **Open source is distributed everywhere**

  › The global internet makes distribution instant and global

› **Anyone can participate**

  › All these projects were quickly picked up and collaborated on all over the world

› **Everyone benefits**

  › Billions of users, companies, and countries benefit from this code under and open source license

This is a global movement that works.

Meet a few of the people who have been there from the most early days this week:

Linus Torvalds

Creator of Linux and Git, and 17th of Time Magazine's **100 Most Important People of the Century.**
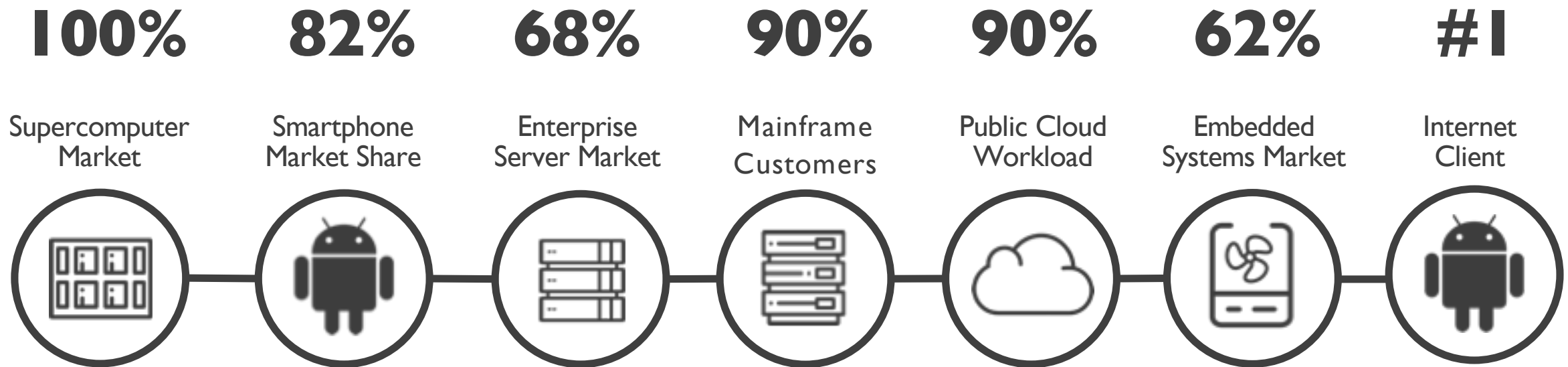

Brian Behlendorf

Primary developer of the Apache Web server and creator of Apache Software Foundation, MIT Technology Review top 100 innovators in the world under the age of 35, former CTO of the World Economic Forum, entrepreneur and tech investor.

Dan Kohn

Conducted the first secure commercial transaction on the web in 1994. Former investor, and entrepreneur is now the Executive Director of the Cloud Native Computing Foundation

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Linux has grown into the most important software platform in the world

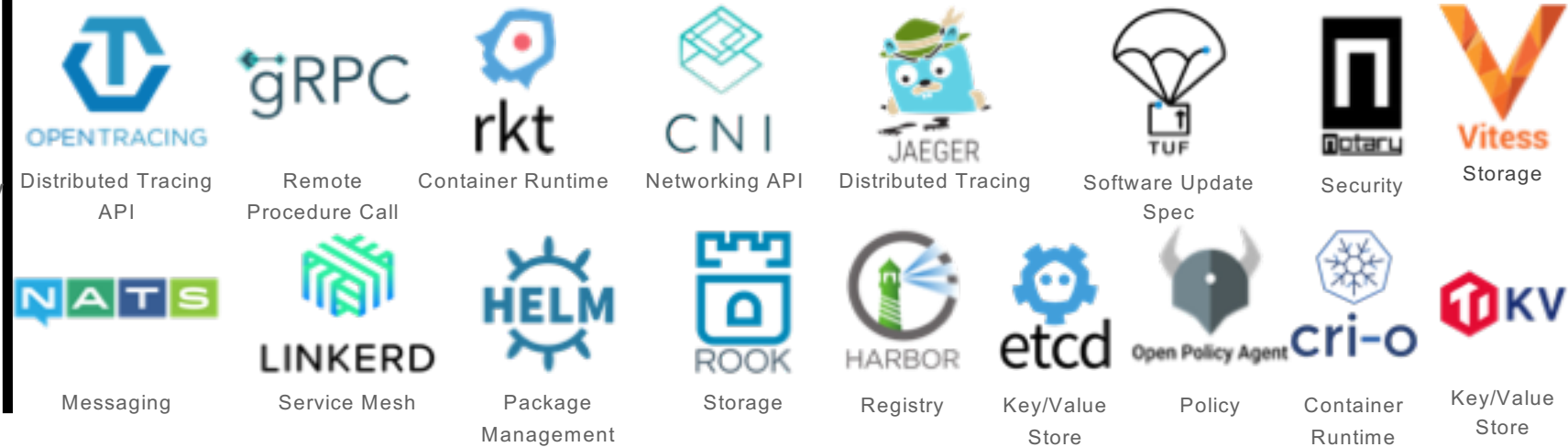| 100%	82%	68%	90%	90%	62%	#1
Supercomputer Market	Smartphone Market Share	Enterprise Server Market	Mainframe Customers	Public Cloud Workload	Embedded Systems Market	Internet Client

Linux eventually dominates every market it enters

More than Linux: Cloud Native Computing Foundation

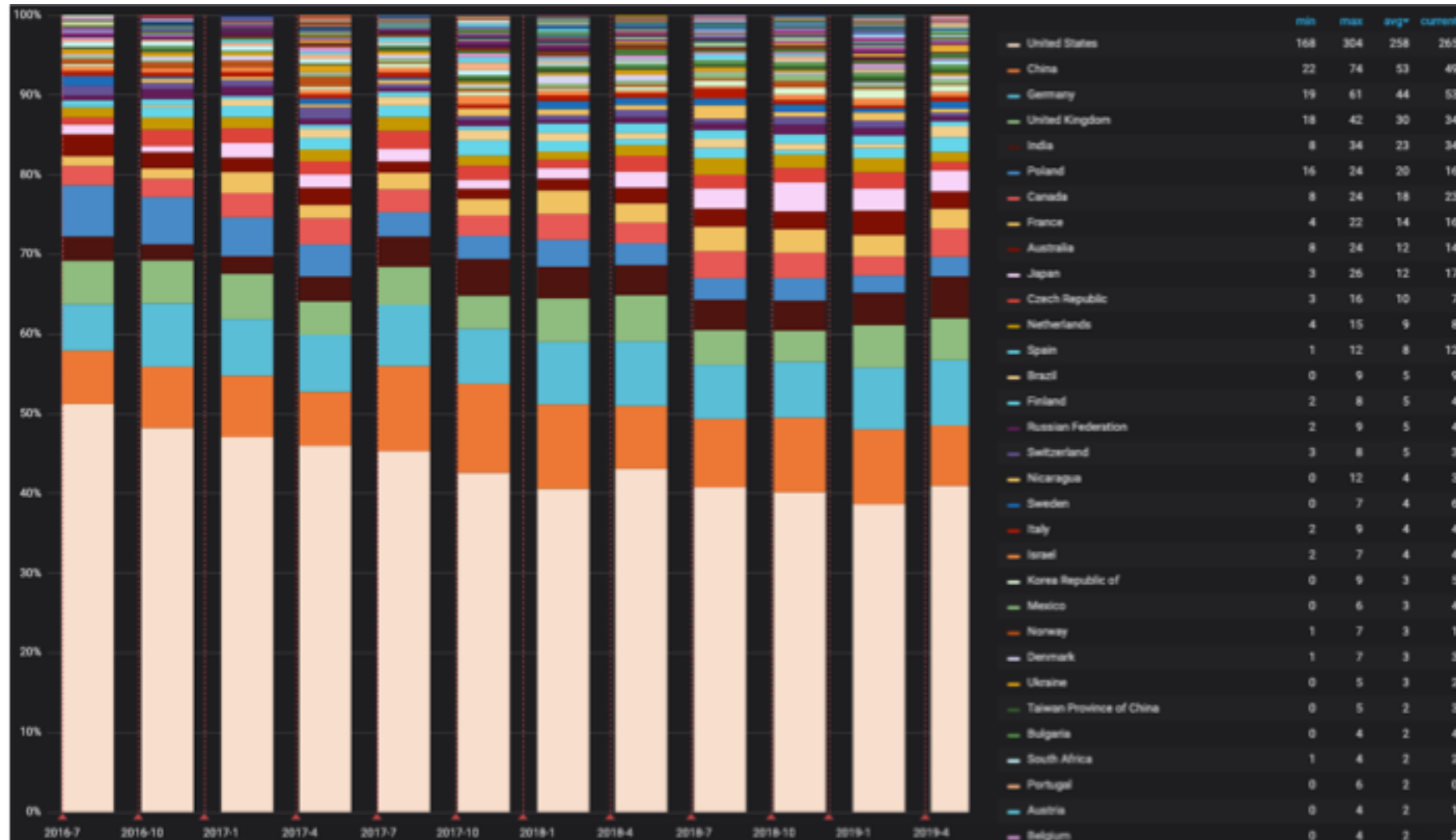- Nonprofit, part of the Linux Foundation; founded Dec 2015

Graduated

Incubating

kubernetes	Prometheus	envoy	OPENTRACING	gRPC	rkt	CNI	JAEGER	TUF	notary	Vitess
Orchestration	Monitoring	Service Proxy	Distributed Tracing API	Remote Procedure Call	Container Runtime	Networking API	Distributed Tracing	Software Update Spec	Security	Storage

CoreDNS	containerd	fluentd	NATS	LINKERD	HELM	ROOK	HARBOR	etcd	Open Policy Agent	cri-o	KV
Service Discovery	Container Runtime	Logging	Messaging	Service Mesh	Package Management	Storage	Registry	Key/Value Store	Policy	Container Runtime	Key/Value Store

- Platinum members:

Alibaba Cloud · aws · Apple · CISCO · DELL Technologies · FUJITSU · Google Cloud · HUAWEI · IBM Cloud

intel · JD.COM · Microsoft Azure · ORACLE · Pivotal · Red Hat · SAMSUNG SDS · SAP · vmware

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China is the #2 Contributor to Kubernetes*

* As well as many other CNCF projects, including 3 that started in China

Chinese Engagement with CNCF

› Over 10% of CNCF members are from China, including 16% of platinum members and 35% of gold members
› 26% of Certified Kubernetes vendors
› 19% of Kubernetes Certified Service Providers
› 32% of Kubernetes Training Partners

Chinese Membership

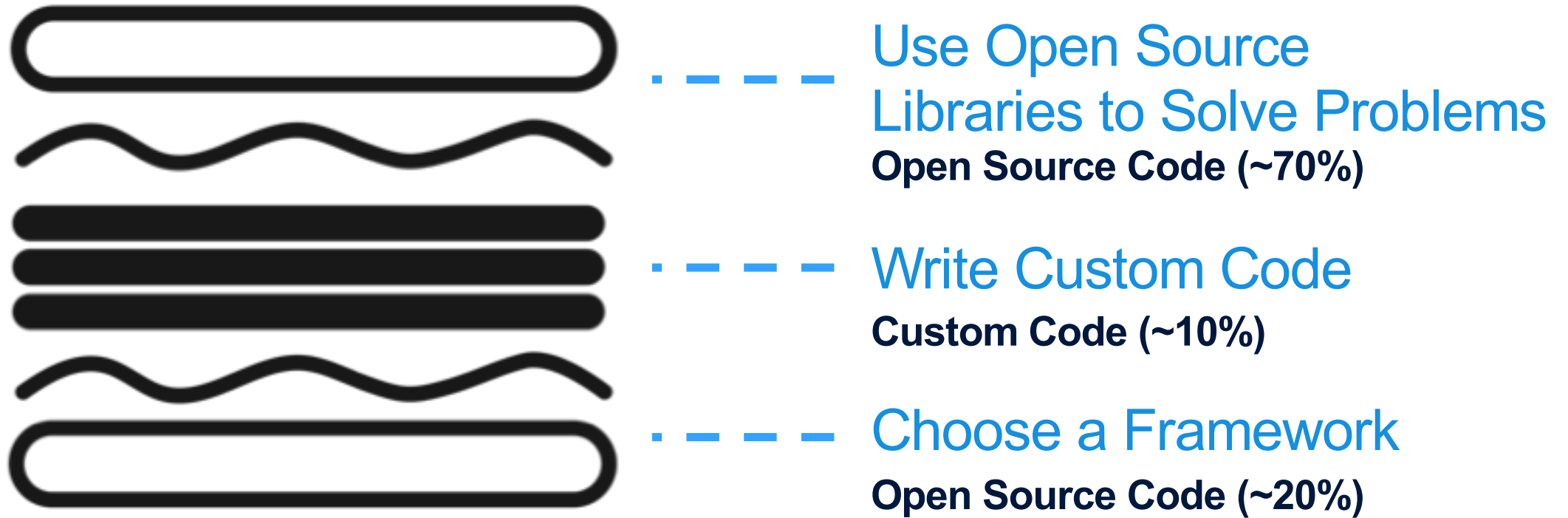## November 2015

1 Platinum

June 2019

3 Platinum

6 Gold

37 Silver and Other

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New CNCF Gold Member

Today open source generally comprises 80-90% of a modern system's total codebase

Use Open Source Libraries to Solve Problems

Open Source Code (~70%)

Write Custom Code

Custom Code (~10%)

Choose a Framework

Open Source Code (~20%)

Today the Linux Foundation is much more than Linux…

Security	Networking	Cloud	Automotive	Blockchain	Edge/Embedded	Web

Security
We securing the internet as home to world's largest certificate authority securing 100M web sites.
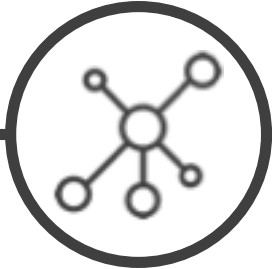
Networking
We are home to 9 of the top 10 open source networking projects in the world backed by the majority of global network providers.

Cloud
We are creating a portability layer for the cloud, driving standards and developing reference tools for cloud native development.

Automotive
Our Automotive Grade Linux platform is backed by 12 automakers and is either in or slated for production in millions of vehicles worldwide.
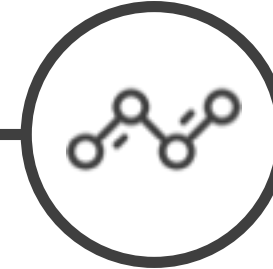
Blockchain
We are creating a permanent, secure distributed ledger that makes it easier to create cost-efficient, decentralized business networks.

Edge/Embedded
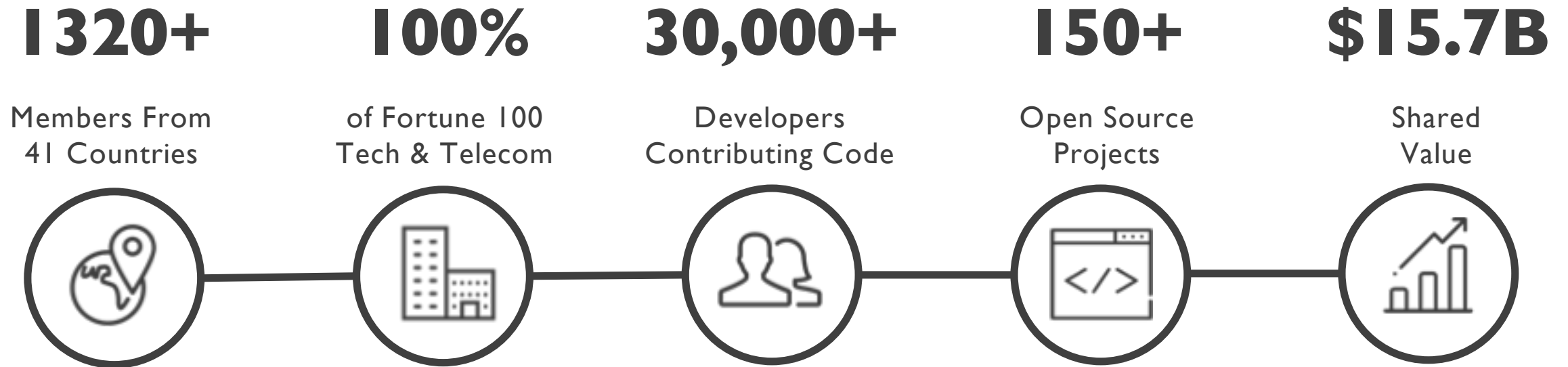We are creating projects used in building the majority of embedded Linux distributions and rationalizing edge computing.

Web
We are providing the application development framework for next generation web, mobile, serverless, and IoT applications.
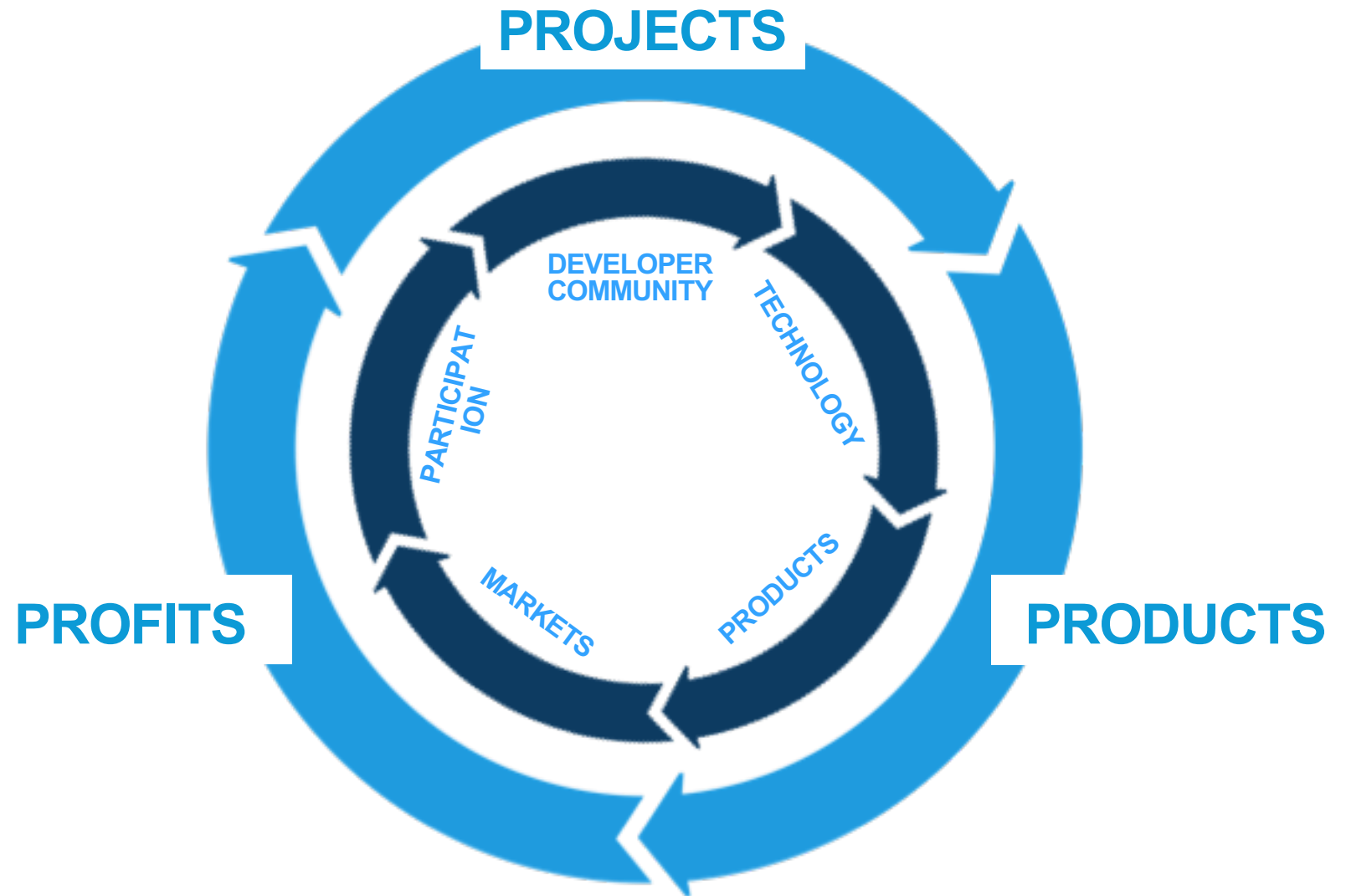
Let's Encrypt
CORE INFRASTRUCTURE INITIATIVE

ONAP OPEN NETWORK AUTOMATION PLATFORM
OPEN DAYLIGHT

kubernetes
CLOUD FOUNDRY
CLOUD NATIVE COMPUTING FOUNDATION

AUTOMOTIVE GRADE LINUX

HYPERLEDGER

Zephyr™
yocto PROJECT
EDGE X FOUNDRY™

node JS
JS Foundation

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The Linux Foundation is a critical part of the tech ecosystem

1320+
Members From
41 Countries

100%
of Fortune 100
Tech & Telecom

30,000+
Developers
Contributing Code

150+
Open Source
Projects

$15.7B
Shared
Value

A new member joins the Linux Foundation every day

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Open Source Ecosystems Create Sustainable Value

Successful projects depend on members, developers, standards and infrastructure to develop products that the market will adopt

PROJECTS

PRODUCTS

PROFITS

DEVELOPER COMMUNITY

TECHNOLOGY

PARTICIPATION

PRODUCTS

MARKETS

Open source is not a zero sum game:

You can help yourself while helping others at the same time

WeBank becomes Linux Foundation
Gold Member

WeBank

June 25, 2019

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FATE project

› **Federated AI Technology Enabler**

› **An Industrial Grade Federated Learning Framework designed to support federated learning architectures and secure computation of ANY machine learning algorithms.**

› **"As a system for Data Cooperation and Privacy-preserving, open source would be the best and even only option for solving the multi-party trust problem which will promote cooperation greatly," said Prof. Qiang Yang, Chief Artificial Intelligence Officer of WeBank, Chair Professor of HKUST.**

› *FATE is an open, equal, and inclusive federation learning corporative community.*

› *Welcome to join us @ https://github.com/WeBankFinTech/FATE*

Learning portal for Linux Foundation Open Source Software University is Online Now!

You can schedule your CKA Exam in major cities in China Now!

KubeCon + CloudNativeCon

› North America 2019
  › San Diego: November 18-21, 2019
  › Sponsorships & CFP open

› Europe 2020
  › Amsterdam: March 30-April 2, 2020

Thank you

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