



When the Open Source Program Office is Responsible for Innovation

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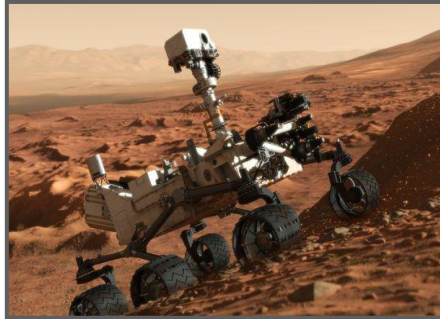
**WHEN IT MATTERS,
IT RUNS ON WIND RIVER.**



Embedded operating system platforms for 1000s of companies

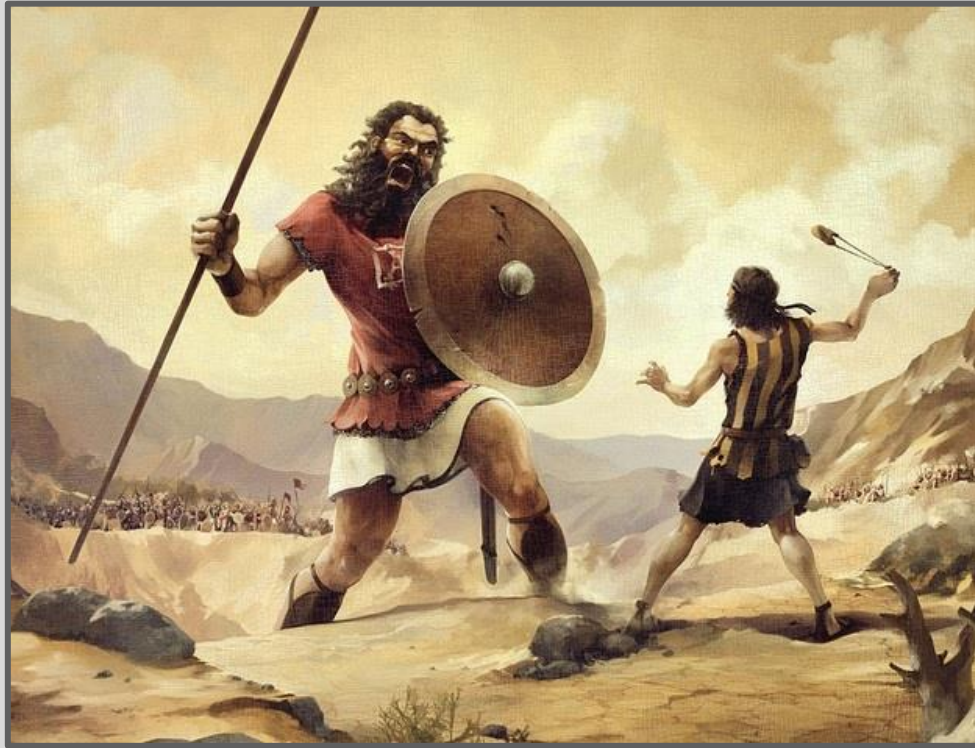
- 2200 employees
- Linux & VxWorks
- Over 2 billion devices (on earth)
- Monopoly of four on Mars

Opportunity (2003-2019)



Spirit (2003-2011)





When the underdog takes on the Giant

Samuel Langley



1834 - 1906

Aviation Researcher

- ✓ Renowned Astronomer
- ✓ Math Professor - US Navy Academy
- ✓ Secretary of the Smithsonian Institute
- ✓ Highly Connected: Andrew Carnegie, Alexander Graham Bell, ...
- ✓ Well funded by DoD (~ \$2M today)
- ✓ Assembled highly talented team
- ✓ New York Times followed him closely



Pursuit of fame (was seeking level enjoyed by Bell and Edison)

Inventors of the Airplane

- ✓ Bicycle Shop Owners
- ✓ No funding
- ✓ No high-level connections
- ✓ No high powered R&D team
- ✓ No college degree
- ✓ Passionate/curious to solve the physical problem of balance & flight



Scratch an Itch

Wright Brothers



1871-1948

1867-1912

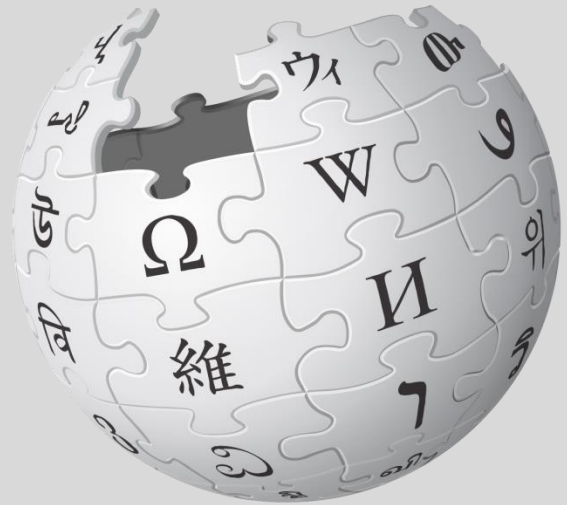
Encarta



1993 - 2009

Wikipedia

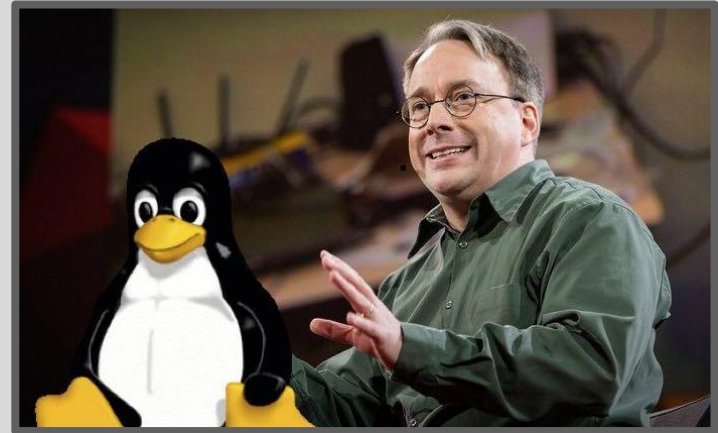
(Larry Sanger & Jimmy Wales)



2001 -

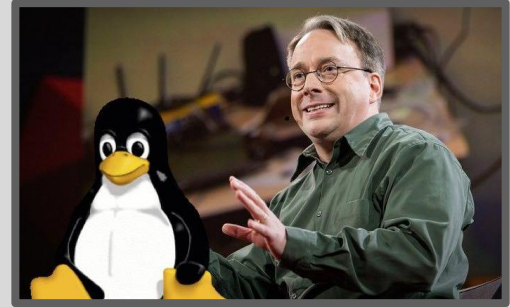
- Unix Cathedrals:
 - Sun
 - HP
 - IBM
 - DEC
 - Bell Labs
- Microsoft
- Apple IOS (Unix based)

Linus Torvalds





Wikipedia



They do it **NOT** because they **HAVE** to, but because they **WANT** to

Open Source Success Stories

7-Zip, Adminer, Android, Apache, Atom, Spark, Apache Tomcat, Angular, Audacity, bash, bind, binutils, bison, bitcoin, BitTorrent, Blender 3D, BugZilla, Busybox, Cassandra, Chrome, Cloud Foundry, CouchDB, Docker, Drupal, Eclipse, Emacs, eMule, FileZilla, FireFox, FreeBSD, FreeRTOS, GCC, gdb, GIMP, Git, Go, grep, Hadoop, Hyperledger, Javascript, Joomla!, Kompozer, Kubernetes, LibreOffice, Linux, LLVM, make, Minix, MongoDB, MusE, MySQL, Node.js, OpenOffice, OpenSSL, OpenStack, OrientDB, PDF Creator, Perl, PostgreSQL, Putty, Python, R, Raspbian, React, Ruby, Samba, Scribus, sed, Sendmail, ShareX, SugarCRM, TensorFlow, TrueCrypt, VS Code, VLC, Vue.js, Webkit, WordPress, X11, zlib + **1000 more ...**

Agenda



- **Why** – Value creation & more fun workplace
- **What** – A program to empower, foster and harvest innovation
- **How** – Built on Open Source principles
- **Who** – Any organization (seeking to empower employees)
- **Success Stories**

Why



Value Creation

new product feature

tool/utility

customer demo

new program

new product idea

open source contribution

more fun workplace

giving back

new process

patent



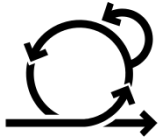


What



It's a Method

Agile/Scrum Method



A set of practices that emphasize daily communication and the flexible reassessment of plans that are carried out in short, iterative phases of work.



Six Sigma Method

A set of management techniques intended to improve business processes by greatly reducing the probability that an error or defect will occur.



Kaizen Method

An approach to creating continuous improvement based on the idea that small, ongoing positive changes can reap major improvements.

Boundless Method

a set of practices , based on open source principles, used to empower, foster and harvest employee led innovation within organizations



How?



The Boundless Method

Human Intrinsic Motivators

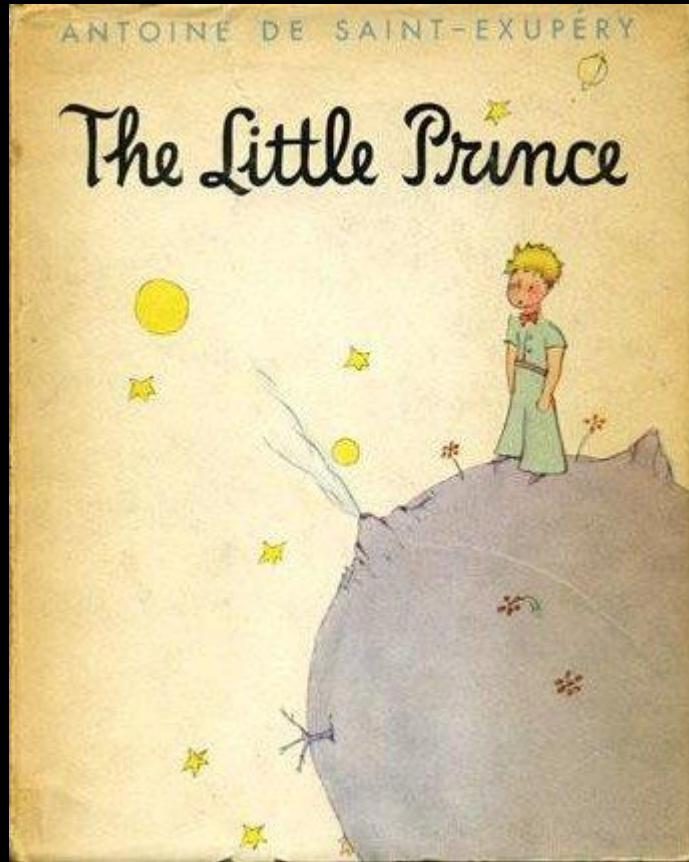
Open Source Principles

Workflow + Playbook

Enabling Technology



Grassroots Innovation



If you want to build a ship,
don't drum up people
together to collect wood and
don't assign them tasks and
work, *but rather teach them
to long for the endless
immensity of the sea.*

... to long for the endless immensity of the sea



- ✓ **Autonomy** - Having control over one's work
- ✓ **Mastery** – getting better at what one does
- ✓ **Purpose** - being part of something meaningful

*They do it **NOT** because they **HAVE** to, but because they **WANT** to*

The Boundless Method

✓ Human Intrinsic Motivators
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Grassroots Innovation

Five Pillars of Open Development



Scratch
an Itch



Transparency



Collaboration

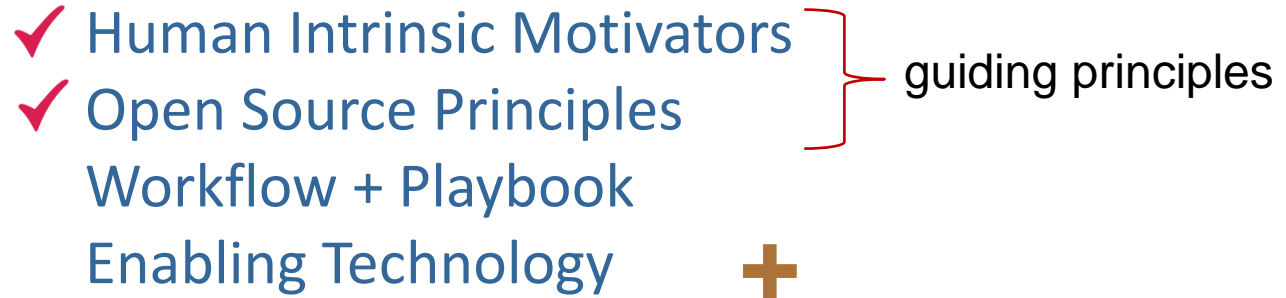


Meritocracy



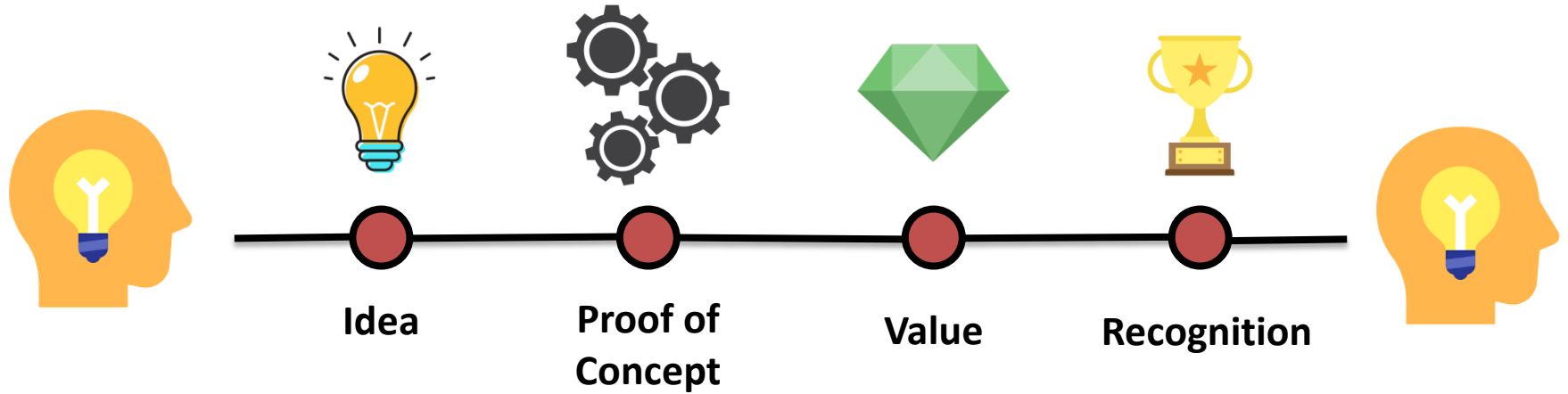
Community

The Boundless Method

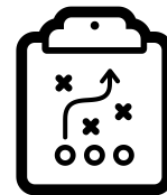


Grassroots Innovation

Workflow



Playbook: Seven Core Principles



1. **Zero mandate to participate** – Only come and play if you want
2. **Track Progress** – We recommend at least three stages: submission (**Idea**), demonstration of feasibility (**PoC**) and impact (**Value**)
3. **Seamless submission process** – Should take < 5 minutes.
4. **Complete Transparency** – establish trust – be upfront to all about what has been submitted, the stage, who is participating, ...
5. **Visibility** – Shine the light - allocated resources (webpage, slides, git repo, ...) to make information easily accessible and visible to all.
6. **Assign a Conductor** – assign an evangelist/manager to evaluate stage status, invite others to participate and to search for value/impact
7. **Recognition** – Create a committee (or assign a person) to recognize innovators for their value contributions.

The Boundless Method


- ✓ Human Intrinsic Motivators
 - ✓ Open Source Principles
 - ✓ Workflow + Playbook
- Enabling Technology



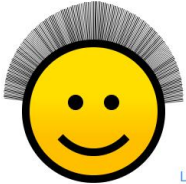
Grassroots Innovation

Enabling Technology





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Rabih's Haircut Challenge

[Learn more...](#)

By The Numbers

65	Projects	
75	Innovators	
34	VxWorks	
20	Linux	

Innovation Tracking @ Wind River

Employee driven innovations @ Wind River are tracked here. An innovation may include (but not limited to):

- cool fun demo (e.g., Internet connected coffee maker);
- new tool or process that make other Wind River groups or customers more productive;
- new product feature;
- platform extensions (e.g., VxWorks, Linux, Titanium);
- customer or trade show demo;
- new open source solution; or
- explore a technology you have an interest in

[View Projects](#) [Submit Project](#) [Boundless Program jive home page](#)

Boundless Innovation @ Wind River

Value Creation

new product feature

tool/utility

customer demo

new program

new product idea

open source contribution

more fun workplace

giving back

new process

patent



The Boundless Method

- ✓ Human Intrinsic Motivators
 - ✓ Open Source Principles
 - ✓ Workflow + Playbook
 - ✓ Enabling Technology
- +

Grassroots Innovation

On the Horizon



Anyone can summit a Challenge

- Open to all
- Hack-a-thons



Thought Leadership Tracking

- Conference Presentations
- Blog posts
- Trade Articles
- Technical White Papers
- Open Source Contributions



Attracting Talent

From the company's website hiring page



WIND GIVES BACK

The work we do within our communities is an important part of who we are. With our volunteer program, our impact extends beyond our employees and customers.



Celebrating you with a birthday day off and our SHINE employee recognition program are just some of the ways we say thank you.

BOUNDLESS INNOVATION

Our Boundless Innovation program empowers employees to discover, create, and play, harvesting innovation that ultimately creates value.

Summary

- Our goal: foster value creation via innovation
- Empowering all employees
- Built upon open source principles
- Reproducible method (workflow + playbook)
- Results exceeded expectations
 - drives innovation
 - Made company more fun and engaging workplace
- We aspire to share and grow a community





Contact



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