Commercial Open Source

Prof. Dr. Dirk Riehle

Friedrich-Alexander University Erlangen-Nürnberg

COSS C03

Agenda

1. Definition (commercial open source)
2. The three core strategies
3. Single vendor open source firms
4. Open source distributor firms
5. Service and support firms
6. Benefits by business function

1. What is Commercial Open Source?

Definition of Commercial Open Source

- **Commercial open source software**
  - Is open source software that
    - Is being developed by one or more software vendors
    - For the purposes of deriving direct revenues from it
- The product is never open source software
  - Customers pay for a basic or whole product
  - By a (the) commercial open source vendor

Why the Open Source Strategy?

- **To drive adoption** (of the product in its markets) due to (nearly) **frictionless distribution**
  - To build a **large (not necessarily paying) user base** from which benefits accrue
  - To have an existing base of users to convert to customers
  - To hinder competitors from getting in
- What is not new
  - Revenue sources
- What **is** new
  - Everything else (changes)

Examples of Commercial Open Source Firms

Wealth Creation Through Commercial Open Source [1]

Company	Core Project(s)	OSS License	Company Creation	Project Creation	OSS Origin	VC Raised (M)	Employees	Est. Revenue (M)	Est. Valuation (B)	Exit Value (B)	Public/Private	Status	Outcome	Exit Date	Technology Area	Business Model
Acquia	Drupal	GPL v2	2007	2000	Personal project	$200	930	$200	$1.5	$1.50	Private	PE	PE	9/24/19	Web Content Mgmt System	Open Core
Aras	Aras PLM	MS-PL	2000	2007	Company project	$56	500	$100	$1.0		Private	Independent			PLM	Open Core
Alfresco	Alfresco	LGPL v3	2005	2005	Company project	$70	460	$100	$0.3	$0.30	Private	PE	PE	2/8/18	ECM <> BPM	Open Core
Automattic	Wordpress	GPL v2	2005	2003	Personal project	$317	1,200	$300	$3.0		Private	Independent			Content Management System	Open Core
Canonical	Ubuntu	GPL	2004	2004	Company project	-	630	$150	$1.5		Private	Independent			Operating System (Linux)	Open Core
Chef	Chef	Apache 2.0	2008	2009	Personal project	$105	350	$100	$1.0		Private	Independent			Configuration Management	Support Subscriptions
Cloudera	Hadoop	Apache 2.0	2008	2006	Internet-Scale (Google)	$1,350	3,100	$850	$4.0	$1.90	Public	IPO	IPO	4/28/17	Big Data / Hadoop Ecosystem	Open Core
Confluent	Kafka	Apache 2.0	2014	2011	Internet-Scale (LinkedIn)	$455	1,100	$300	$4.5		Private	Independent			Big Data / Middleware / Streaming	Open Core
Couchbase	Couchbase	Apache 2.0	2005	2003	Spin-out (LiveJournal)	$246	500	$100	$1.5		Private	Independent			NoSQL Database	Open Core
Docker	Docker	Apache 2.0	2008	2013	Spin-out (dotCloud)	$308	500	$100	$1.0		Private	Independent			Developer Tools	Open Core
Databricks	Spark	Apache 2.0	2013	2010	Academia/Research (AMPLa	$900	1,300	$400	$6.5		Private	Independent			Big Data / Hadoop Ecosystem	Open Core
Datastax	Cassandra	Apache 2.0	2010	2008	Internet-Scale (Facebook)	$190	580	$150	$2.5		Private	Independent			NoSQL Database	Open Core
Elastic	ElasticSearch	Apache 2.0	2012	2010	Personal project	$272	1,600	$400	$8.0	$2.5B	Public	Independent	IPO	10/5/18	Distributed Search Index + Tools	Open Core
Fastly	Varnish	BSD	2011	2006	Internet-Scale (Verdens Gan	$220	550	$200	$8.0	$2B+	Public	Independent	IPO	5/18/19	CDN	Open Core
ForgeRock	OpenAM/IDM/DJ/IG	CDDL	2010	2005	Spin-out (Sun)	$235	670	$200	$2.0		Private	Independent			Identity and Access Management	Open Core
GitHub	Git	GPL v2	2009	2005	Personal project	$350	1,550	$400	$7.5	$7.50	Public (via MSFT)	Acquired	M&A	6/4/18	Distributed Source Code Version Control	Open Core
GitLab	Git	GPL v2	2014	2011	Personal project	$436	1,300	$100	$5.0		Private	Independent			Distributed Source Code Version Control	Open Core
HashiCorp	Many	MPLv2	2012	2010	Personal project	$350	950	$150	$5.1		Private	Independent			Developer / Ops / Infra Tools	Open Core
Instructure	Canvas	AGPL v3	2008	2011	Company project	$90	1,420	$220	$1.4	$0.65	Public	Independent	IPO	11/13/2015	Learning Management	Open Core
JetBrains	IntelliJ	Apache 2.0	2000	2009	Company project	-	800	$350	$4.0		Private	Independent			Developer Tools	Open Core
JFrog	Artifactory	AGPL v3	2008	2007	Company project	$230	460	$150	$1.5		Private	Independent			Software Artifact Repository	Open Core
Kaltura	Kaltura	AGPL v3	2006	2009	Company project	$166.00	530	$200	$1.5		Private	Independent			Video Editing Platform	Open Core
Liferay	Liferay Portal	LGPL v2.1+	2004	2000	Company project		870	$250	$2.5		Private	Independent			Enterprise Portal	Open Core
Magento Commerce	Magento	OSL v3, AFL v3	2007	2008	Company project (Varien)	$272	700	$200	$1.7	$1.68	Public (via Adobe)	Acquired	M&A	5/20/18	Web Content Mgmt System	Open Core
Mapbox	Mapbox GL JS	BSD-3	2010	2010	Company project (Developm	$275	450	$100	$1.5		Private	Independent			Mapping Software	Open Core
Mirantis	OpenStack	Apache 2.0	1999	2010	Academia/Research (NASA)	$227	500	$100	$1.0		Private	Independent			Infrastructure Software	Open Core
MongoDB (fka 10gen)	MongoDB	SSPL (not OSI)	2007	2009	Spin-out (10gen)	$311	1,500	$400	$11.0	$1.60	Public	Independent	IPO	10/19/17	NoSQL Database	Open Core
Mozilla Corporation	Firefox	MPLv2	2003	2002	Spin-out (Netscape)	$22	1,100	$550	$5.0		Private	Independent			Web Browser	Ads/Royalties
MuleSoft	Mule ESB	CPAL	2006	2003	Personal project	$311	1,750	$700	$8.0	$6.50	Public (via SFDC)	Acquired	IPO + M&A	3/20/18	Middleware	Open Core
MySQL AB	MySQL	GPL v2	1995	1995	Company project	$41	800	$1,000	$1.1	$1.10	Public (via Oracle)	Acquired	M&A	2/26/08	Relational Database	Open Core
Neo4j	Neo4j	GPLv3	2007	2007	Company Project	$160	300	$100	$1.0		Private	Independent			Graph Database	Open Core
Nicira	Open vSwitch	Apache 2.0	2007	2009	Academia/Research (Stanfor	$42	100	$2,000	$1.3	$1.26	Public (via VMware)	Acquired	M&A	7/23/12	SDN / Network Virtualization	Open Core
Odoo	Odoo	LGPL v3	2005	2005	Company project	$105	950	$250	$1.5		Private	Independent			Business Applications	Open Core
Pentaho	Pentaho	Apache 2.0	2004	2004	Company project	$75	670	$100	$1.0	$0.50	Public (via Hitachi)	Acquired	M&A	6/4/15	BI/ETL	Open Core
Pivotal (Now VMware Tanz	CloudFoundry	Apache 2.0	2013	2009	Company project (VMware)	$1,700	2,400	$800	$3.5	$4.00	Public	Acquired	IPO	4/20/18	PaaS / Hadoop / Spring	Open Core
Puppet Labs	Puppet	Apache 2.0	2005	2005	Company project	$142	560	$250	$2.5		Private	Independent			Configuration Management	Open Core
Rapid7	Metasploit	BSD-3	2000	2003	Personal project	$89	1,800	$350	$2.5	**$0.90**	IPO	IPO	IPO	7/22/15	Security	Open Core
Red Hat	Linux	GPL v2	1993	1991	Personal project	$5	13,100	$3,500	$34.5	**$34.00**	Public	Acquired	IPO + M&A	8/11/99	OS, Middleware, Infrastructure Software	Support Subscriptions
Linden Lab	Second Life	LGPL	1999	2003	Company project	$19	250	$100	$0.5		Private	Independent			Virtual Worlds	Open Core
Sourcefire	Snort	GPL v2	2001	1998	Personal project	$40	600	$500	$3.0	$2.70	Public (via Cisco)	Acquired	M&A	10/7/13	Network Intrusion Detection	Open Core
SugarCRM	SugarCRM	Previously A2.0	2004	2004	Company project	$146	440	$175	$1.0		Private	PE	PE	8/20/18	CRM	Previously Open Core
SUSE	Linux Kernel	GPL v2	1992	1991	Personal project	-	1,500	$400	$2.5	$2.50	Public (via Novell) + Private (MicroF	M&A		11/4/03	Operating System (Linux)	Support Subscriptions
Talend	Talend Data Integration	Apache 2.0	2005	2006	Company project	$102	1,300	$200	$1.1	$0.55	Public	Independent	IPO	7/28/16	SOA/ETL/AI/Middleware	Open Core
VA Linux (Geeknet)	Linux	GPL v2	1993	1991	Personal project	$30	300	$120	$0.2	$0.15	Private	Acquired	IPO	12/9/99	Computer Systems	Hardware Sales
WP Engine	Wordpress	GPL v2	2010	2003	Personal project	$291	900	$200	$1.0		Private	Independent			Content Management System	Open Core
						$10,951	**53,820**	**$17,565**	**$161.2**	**$69.29**						

[1] Retrieved from https://oss.cash on 2020-08-14

Origin of the Term Commercial Open Source

REGISTRY WHOIS FOR COMMERCIALOPENSOURCE.COM

Domain Name: **commercialopensource.com**

Registrar: NETWORK SOLUTIONS, LLC.
Whois Server: whois.networksolutions.com
Referral URL: http://www.networksolutions.com
Status: clientTransferProhibited

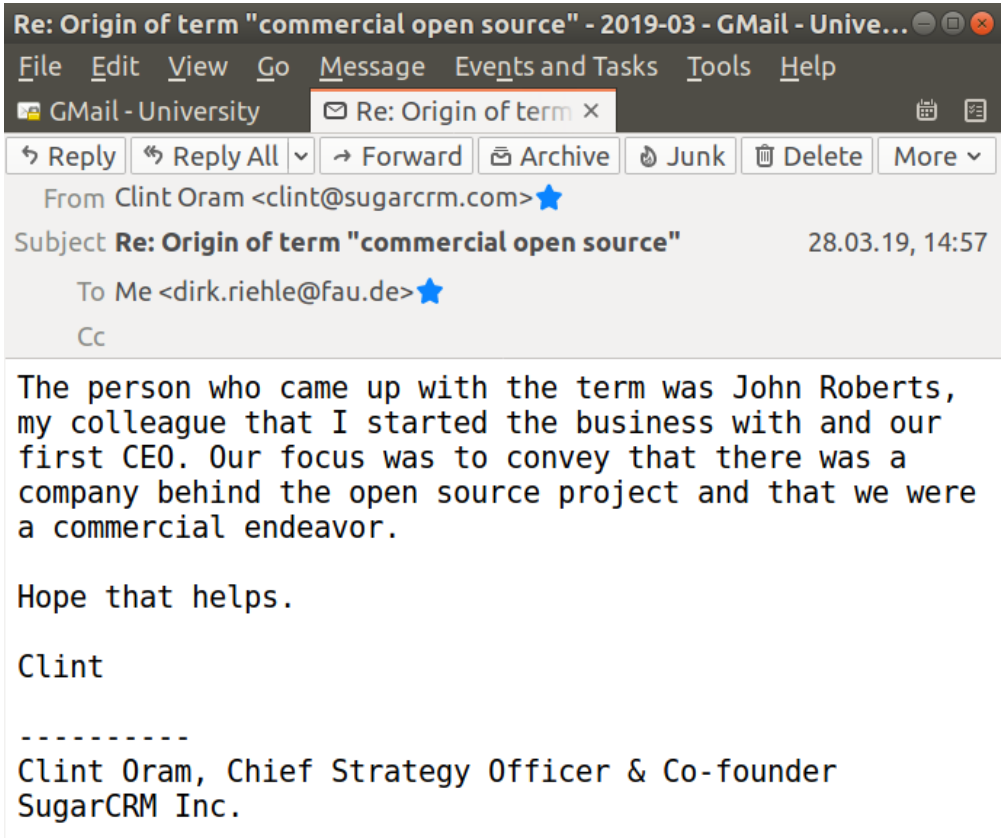
Expiration Date: 2011-04-26
Creation Date: 2005-04-26
Last Update Date: 2008-01-27

Name Servers:
dns1.sugarcrm.com
dns2.sugarcrm.com
See commercialopensource.com DNS Records

Information Updated: Fri, 19 Jun 2009 05:32:53 UTC

COMMERCIALOPENSOURCE.COM SITE INFORMATION

IP: 70.42.242.70
IP Location: Cupertino, United States
Website Status: active
Server Type: Apache



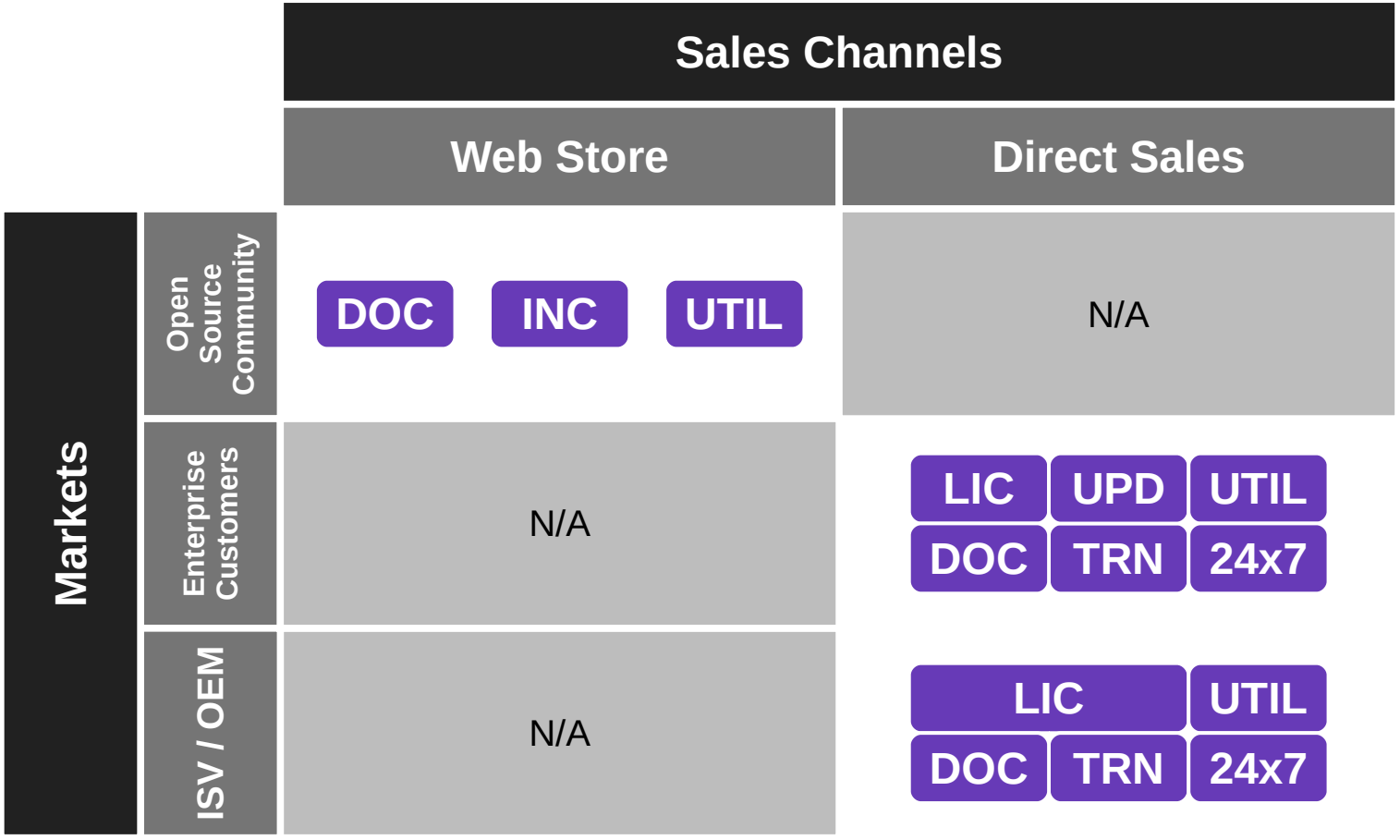
Open Source Software and the Commercial Product

- **Core product =**
  - Open source software
  - Additional functionality
  - Complementary artifacts
  - Self-help services
- **Basic product =**
  - Core product +
  - Fitness for use
  - Certification
  - Support services
- **Whole product =**
  - Basic product +
  - Training
  - Consulting
  - Operations

} **Sometimes commercial**

} **Always commercial**

An Example Commercial Open Source Product [WR13]



DOC Documentation

INC Incident-based support

UTIL Utilities

LIC Commercial license

UPD Update service

TRN Training

...

24x7 24x7 hotline

2. The Three Core Strategies

Sustainable Open Source (Recap)

- Traditional community projects
- Non-profit open source organizations
  - Community-led open source foundations
  - Vendor-led open source foundations
  - User-led open source foundations
- **For-profit open source firms**
  - **Single-vendor open source firms**
  - **Open source distributor firms**
  - **Service and support firms**

} **Commercial open source**

Commercial Open Source by Intellectual Property

- Single-vendor open source firms
  - Provide a traditional software product to enterprises
  - Exclusively own (key parts of) the software their business is based on
  - Can attract venture capital; can have outsize returns
- Open source distributor firms
  - Provide a well working assembly of open source components
  - Exclusively own non-core-software IP (configuration data, regression test suites, …)
  - Can attract venture capital; can have outsize returns
- Service and support firms
  - Service existing community open source software
  - Share in the IP, don’t dominate it
  - Don’t attract venture capital

3. Single-Vendor Open Source Firms

Definition of Single-Vendor Open Source

- **Single-vendor open source software** is commercial open source software that
  - Is managed and developed by **a single vendor**
- A **single-vendor open source software firm** is a software vendor that
  - Manages and develops single-vendor open source software

Characteristics of Single-Vendor Open Source

- Single-vendor open source firms
  - Owns most or all of the key control mechanisms for open source
    - In particular, they are (by definition) the sole copyright owner
  - Can attract venture capital funding and can have outsize returns
- Perhaps better be called neo-proprietary software vendors

Three Generations of Single-Vendor Open Source Firms

- The pioneers (199x-2002)

- The second wave (2002-2008)

- The current breed (since 2008)

ource Startups

First and Second Generation Single-Vendor Open Source Firms

Third Generation Single-Vendor Open Source Firms [1]

[1] More at http://bit.ly/2NxhfIF; additions welcome

Community vs. Commercial Edition (Single-Vendor Firms)

- **Community edition**
  - **Core product**
    - **Core software**
      - **Provided under an open source license**
    - Some complementary artifacts
    - Self-help services

- **Commercial edition**
  - **Core product**
    - Core software
      - **Provided under a commercial license**
    - Additional functionality
    - Complementary artifacts
    - Self-help services
  - **Basic product =**
    - Core product +
    - Fitness for use
    - Certification
    - Support services
  - **Whole product =**
    - Basic product +
    - Training
    - Consulting
    - Operations

User to Customer Conversion

- Community edition
  - Home user
    - Will never pay money
    - But pays with time, feedback
  - Line-of-business user
    - Likes $0 line-items
    - May be ignorant of risks

- Commercial edition
  - Enterprise customer
    - Is willing to pay
    - Requires enterprise features
  - Internal IT department
    - Has appropriate budget
    - Wants professional support

The Commercial Open Source Challenge

Structure product and services so that you

1. Maximize conversion to paying customer
2. While benefiting from user community
3. And keeping the competition at bay

Intellectual Property Management (Single-Vendor Firms)

- **Intellectual property rights imperative** (of single-vendor open source)
  - “Always act in such a way that you, and only you, possess the right to provide the open source project under a license of your choice.” [1]
- Use contributor agreement to maintain ownership
  - Almost all single-vendor open source firms require copyright transfer for any contributions to maintain full IP ownership [2]

[1] Riehle, D. (2009). The Intellectual Property Rights Imperative.
[2] All you really need is a relicensing right though

Multi-Vendor Commercial Open Source

- Multi-vendor = no single dominant owner, rather shared control
  - If so, best under a foundation to ensure reasonable governance
  - Creates the problem of starving the project for new features

Hadoop	Kafka	Lucene / Solr
cloudera	confluent	Lucidworks
MAPR	aiven	elastic
HORTONWORKS	instaclustr	swiftype

4. Open Source Distributor Firms

Definition of Open Source Distribution

- An **open source distribution**
  - Is a well integrated collection of open source components and applications
- An **open source distributor firm**
  - Is firm that provides an open source distribution as a product or service

Characteristics of an Open Source Distribution

- An open source distribution is a complex software where complexity stems from
  - The number of components
  - The individual complexity of a component
  - Keeping the components working with each other
  - Keeping the components up-to-date
- A commercial open source distributor hides this complexity from the user (for pay)

Examples of Open Source Distributor Firms

- Linux

- OpenStack

- Miscellaneous

Intellectual Property Management (Distributor Firms)

- Distributor firms do not exclusively own the copyright to the code
- Distributor firms can (and do) exclusively own
  - Build processes for building the product from its components
  - Compatibility matrices and configuration data
  - Knowledge databases for support
  - Tests and test suites
- Distributors own “what’s in between” the open source code
  - Sometimes manifests itself exclusively in people

Community vs. Commercial Edition (Distributor Firms)

- Community edition
  - Example Linux-based distributions
    - Canonical
      - Ubuntu
    - Univention
      - Univention Corporate Server
    - Red Hat
      - Fedora, CentOS
    - Suse
      - OpenSuse
  - Product
    - **Core product**
      - Core software
        - **Provided under its open source license**
      - Complementary artifacts
      - Self-help services

- Commercial edition
  - Example Linux-based distributions
    - Canonical
      - Ubuntu
    - Univention
      - Univention Corporate Server
    - Red Hat
      - Red Hat Enterprise Linux
    - Suse
      - Suse Linux Enterprise Server
  - Product and services
    - **Core product**
      - Core software
        - **Provided under its open source license**
      - Additional functionality
        - **Provided under a commercial license**
      - Complementary artifacts
      - Self-help services
    - **Basic product**
    - **Whole product**

5. Service and Support Firms

Definition of Service and Support Firm

- An open source service and support firm
  - Is a consulting firm that services and supports community open source software

Characteristics of Service and Support Firms

- A service and support firm is a consulting firm
  - Revenues mostly scale with labor
- These firms contribute to the open source project they support
  - Such positioning is important for marketing and sales

6. Benefits by Business Function

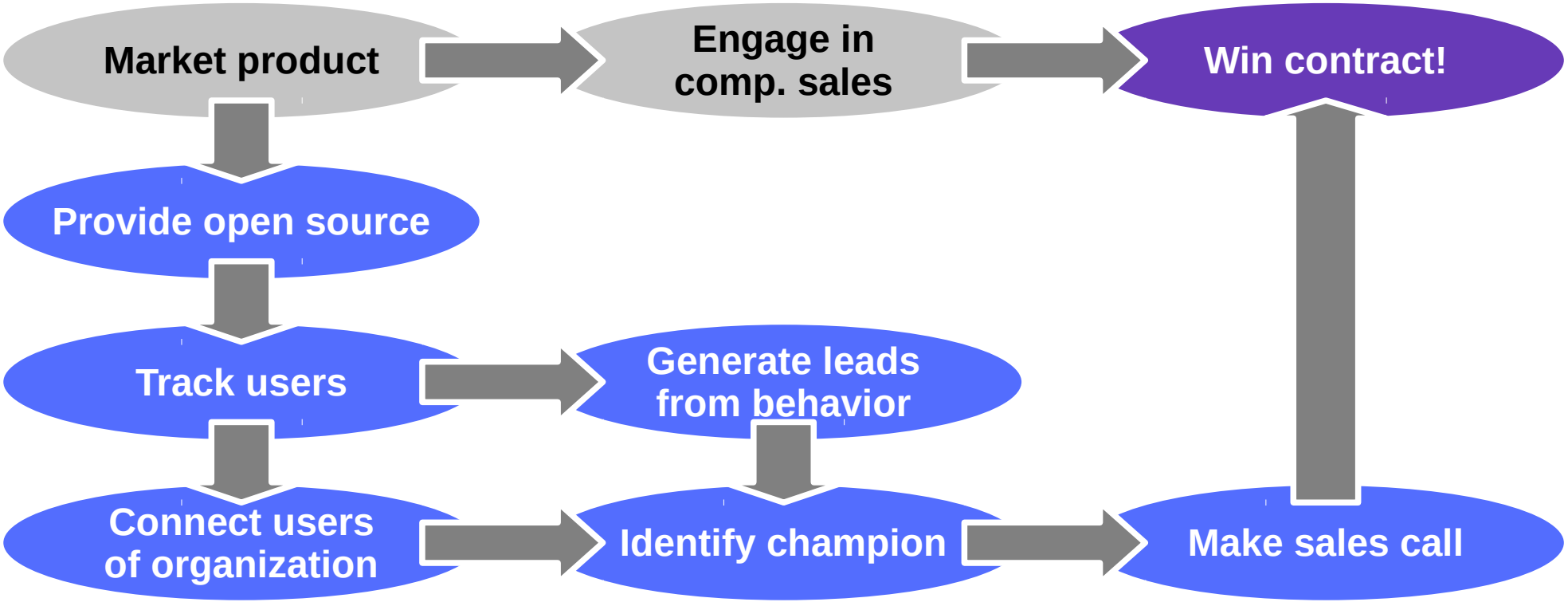
Benefits By Business Function

- Marketing
  - Generate leads more broadly, faster, cheaper
- Sales
  - Sell more effectively
- Business development
  - Identify partner opportunities better
- Product management
  - Identify market requirements faster better
- Software development
  - Build a superior product faster at lower cost
- Product support
  - Support better cheaper

Benefits to Marketing

- Community word-of-mouth helps evangelize product
- Community creates wider outreach than possible without
- Frictionless distribution (no barriers) helps drive adoption

Benefits to Sales



Benefits to Business Development

- User innovation helps identify strategic partners

Benefits to Product Management

- Identify customer requirements more readily
- Explore new market segments more cheaply
- Let users explore feature space for you
- Let users explore alternatives at no costs

Benefits to Software Development

- Find bugs fast
- Get bug reports for free
- Get code contributions for free
- Explore design and implementation
- Recruit and hire more effectively

“Source code [is just] 10% of the effort.” [L07]

Benefits to Support

- Get help with self-help services
- Reduce overall support load through self-help
- Feed self-help services into commercial documentation

But at What Costs?

- Some retraining of traditional business functions
- Establishment of new community management function

Summary

1. Definition (commercial open source)
2. The three core strategies
3. Single vendor open source firms
4. Open source distributor firms
5. Service and support firms
6. Benefits by business function

Thank you! Questions?

dirk.riehle@fau.de – http://osr.cs.fau.de

dirk@riehle.org – http://dirkriehle.com – @dirkriehle

Credits and License

- Original version
  - © 2020 Dirk Riehle, some rights reserved
  - Licensed under Creative Commons Attribution 4.0 International License
- Contributions
  - None yet