

Open Innovation Projects

Website's content (partial) in one document and extrapolation of OIP's categorization to projects not listed by OIP

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1 Introduction

open-innovation-projects.org (*OIP* in the text following) lists mostly OSHW projects and systematically categorizes them. Out of the ~150 listed entries, the following 109 retained our attention in the context of OSHWL (those that previously weren't mentioned in OSHWL were subsequently added to it):

title	OSHWL path	keywords from OIP
3G Stoves	energy/thermal/stoves	stove, 3g, woodgas, tlud, biomass
Absorber Roof	energy/solar/thermal	solar, thermal, collector, roof, intergrated
Abundant Water (AW)	water treatment	Clean Drinking Water, clay pot water filter, water, appropriate technology
Agua Clara	water treatment	water treatment, water, development, water purification
Akvo	water	water sanitation development
Always Innovating Touch Book (AITB)	electro-it-monit	
Arduino	electro-it-monit	-
Atari Coldfire	electro-it-monit	
Aurora OS Mixer (AOSM)	audio-visual	
AVR Butterfly Logger (AVR BL)	electro-it-monit	datalogger, logging, logger
AVR Butterfly MP3 (AVR BM)	audio-visual	
AX84 Firefly	audio-visual	
Balloon	electro-it-monit	-
Beagle Board	electro-it-monit	omap3, linux, open hardware
Ben NanoNote	electro-it-monit	copyleft hardware, open source, openwrt
Biobricks	health	
BitsFromBytes (BFB)	robo-manuf	
Brewtopia	food/prepare	
Canuckle LEDlights (CLED)	energy/light	solar, energy, green, DIY, alternative, sun, heating, electricity, solar cooking, solar concentration, heliostat
Cfree OS Optics (COSO)	audio-visual/optics	Optics, Telescope, Renewable Thermoplastic Resin, Membrane Mirror, Renewable Thin Film Mirror, Cosmos
Chumby	electro-it-monit	
Contraptor	structures/assemblies	cnc, cartesian robot, construction set, arduino, 3d printer, g-code
Craftster	oshw-mgmt	-
Crypto Stick	electro-it-monit	
Cubespawn	robo-manuf	open source, flexible manufacturing system, FMS, factory, robot
Daisy MP3	audio-visual	
diy_efi	transport/propulsion	-
Elphel	audio-visual	
Ethernut	electro-it-monit	-
Etherrape	electro-it-monit	-
Fab Camera	audio-visual	
Fab@Home	robo-manuf	-
Flash-Plaice	electro-it-monit	-
Fnordlicht	audio-visual	
Formica	robo-manuf	

Tab. 1: OIP entries treated by OSHWL (1/3)

title	OSHWL path	keywords from OIP
Free Art Bureau	oshw-mgmt	-
Free Beer	food/prepare	
Freeduino	electro-it-monit	-
Gumstix	electro-it-monit	-
HD Video Capture	audio-visual	
Hexayurt	structures/construction	
Im-FFeeder	food/grow	automatic, feeder, fish, pet, pond, aquarium
IP04 (4-Port IP-PBX)	electro-it-monit	
IP08 (8-Port IP-PBX)	electro-it-monit	
iRobot	robo-manuf	
K People	oshw-mgmt	knowledge worker
LED Stripe	audio-visual	
Linux omap	electro-it-monit	
Local Motors	transport/road/cars	-
MakerBot	robo-manuf	
Mikrokopter	transport/aeronautics	
Milkymist	audio-visual	
MISA	audio-visual	
MyOpenRouter	electro-it-monit	
Neuros Link	audio-visual	
Neuros OSD	audio-visual	
Niftymitter	electro-it-monit	
oBiCo	transport/road/bicycle	-
OMFootCtrl	electro-it-monit	
OLPC	electro-it-monit	
O. Architecture Network (OAN)	structures/construction	-
O. Garments	robo-manuf/manuf/textile	-
O. Moto X	transport/road	Race, motorcycle, ttxgp, electric
O. Pandora	audio-visual	
O. Prosthetics Project (OPP)	health	
OS Cookbook	food/prepare	-
OS Ecology	oshw-mgmt	open source economy, efficient economy
OS Washing Machine (OSWM)	cleaning/laundry	-

Tab. 2: OIP entries treated by OSHWL (2/3)

title	OSHWL path	keywords from OIP
O. Waterbike Project (OWbP)	transport/water	
OS BHKW	energy/thermal/cogen	-
OpenBeacon	electro-it-monit	
OpenCola	food/prepare	
OpenEEG	health	
openenergymonitor	electro-it-monit	energy monitor, power meter, renewable energy
openEyes	electro-it-monit	
OpenMini 650 Sailboat (OM650)	transport/water	-
OpenMoko	electro-it-monit	
OpenPCD	electro-it-monit	
OpenRemote	electro-it-monit	-
OpenServo	robo-manuf	-
OpenSpace	oshw-mgmt	creativity brainstorming documentation
OpenSPARC	electro-it-monit	
OpenWrt	electro-it-monit	-
OScar project	transport/road/cars	
PC Engines	electro-it-monit	
Rallylog	electro-it-monit	
Ravelry	robo-manuf/manuf/textile	-
RepRap	robo-manuf	printer, 3d printer
RFID door opener	structures/assemblies/locks	
RiverSimple	transport/road	hydrogen, electric vehicle
RONJA	audio-visual/optics	-
Sanguino	electro-it-monit	microcontroller, board
Semitone Dimmers	audio-visual	
Solar Cooking Archive (SCA)	energy/solar/thermal	-
solar tracking	energy/solar/tracking	-
Spiffchorder	audio-visual	
SquidBee	electro-it-monit	-
Stribe	audio-visual	
Stroblt Triggrr	audio-visual	
Thingiverse	robo-manuf	Designs
Traxmod	audio-visual	
zeroclock	electro-it-monit	
Zoybar	audio-visual	

Tab. 3: OIP entries treated by OSHWL (3/3)

We will also apply the same “standardized” categorization effort to the following OSHWL projects, not listed by OIP (table 4):

title	OSHWL path	keywords
ADABio-Autoconstruction		
Global Anchor		
Postfossil Mobil		
SolarFire		
SolarFlower		

Tab. 4: other OSHWL projects categorized according to OIP’s method

The following is the categorization itself (in tables making overview and comparison easy, as opposed to individual project sheets as is the case on open-innovation-projects.org), copied from OIP for the projects they list and complemented with the projects from table 4.

There are three groups of criteria:

- project details
- product details
- institutional design and production

2 Project details

First, a description of the categories in the tables directly following.

project type

single project one or more specific product(s) is/are shown and/or developed
collection of projects overview over several different projects or product, e.g. OIP itself

development Status current stage of development according to the following:

- 1 planning/virtual development - ideas and digital dev. evolving
 - 2 prototyping started - first physical proto. assembled, testing phase
 - 3 first working proto. - working proto. available, release to community, further dev. needed
 - 4 production stable - fully functional product permanently available on market, further dev. possible
 - 5 mature - final dev. stage reached, no further dev. necessary
- Inactive dev. stopped, no final product available

in case several products are being developed, the stage of the most advanced product is indicated.

license and trademark

- whether the project is using an open license and of which type
- whether they have a registered trademark

country main location, i.e. home country of the project leader, the core team or the office location.

start year year in which the project was initiated.

Tables

title	entry type		dev. status	licence and TM							country	start year
	collection of projects	single project		GPL, LGPL or similar copyleft license	BSD, MIT or similar permissive license	Creative Commons license	other open license	commercial license	no license	registered trademark		
3G Stoves	x		3				x			x	IN	2008
Absorber Roof		x	3							x	AUS	2007
AW		x	3							x	AUS	2009
Agua Clara		x	5			x					US	2005
Akvo	x		4	x		x					NL	2006
AITB												
Arduino		x	5	x		x				x	IT	2005
Atari Coldfire												
AOSM												
AVR BL		x	3			x					UK	2003
AVR BM												
AX84 Firefly												
Balloon		x	3					x			-	1999
Beagle Board		x	4	x		x				x (?)	US	2007
Ben NanoNote	x		4	x		x				x	HK	2009
Biobricks												
BFB												
Brewtopia												
CLED		x	3								CA	2008
COSO	x		3			x					AUS	2007
Chumby												
Contraptor		x	3	x		x					US	2007
Craftster	x		5							x		
Crypto Stick												
Cubespawn	x		3					x			US	2009
Daisy MP3												
diy_efi	x		2	x							US	1994
Elphel												
Ethernut	x		4			x					D	2001
Etherrape		x	3	-	-	-	-	-	-	-	-	2006
Fab Camera												
Fab@Home		x	2			x					US	2006
Flash-Plaice		x	1	x							-	2007
Fnordlicht		x	1	x								
Formica												

Tab. 5: project details of OIP entries treated by OSHWL (1/3)

title	entry type		dev. status	licence and TM					country	start year	
	collection of projects	single project		GPL, LGPL or similar copyleft license	BSD, MIT or similar permissive license	Creative Commons license	other open license	commercial license			no license
Free Art Bureau	x		4	x						F	2011
Free Beer											
Freeduino		x	3			x				-	-
Gumstix		x	4			x			x	US	2003
HD Video Capture											
Hexayurt											
Im-FFeeder		x	3	x						MX	2011
IP04											
IP08											
iRobot											
K People		x	2				x		x	IT	2009
LED Stripe											
Linux omap											
Local Motors		x	2							US	2007
MakerBot											
Mikrokopter											
Milkymist											
MISA											
MyOpenRouter											
Neuros Link											
Neuros OSD											
Niftymitter											
oBiCo		x	2						x	D	2007
OMFootCtrl											
OLPC											
OAN		x	4			x				US	2006
O. Garments		x	1						x	D	2008
O. Moto X		x	1				x			E	2010
O. Pandora											
OPP											
OS Cookbook		x	3	x						US	2002
OS Ecology		x	3			x				US	2004
OSWM		x	2						x		2008

Tab. 6: project details of OIP entries treated by OSHWL (2/3)

title	entry type		dev. status	licence and TM						country	start year
	collection of projects	single project		GPL, LGPL or similar copyleft license	BSD, MIT or similar permissive license	Creative Commons license	other open license	commercial license	no license	registered trademark	
OWbP											
OS BHKW			2					x		D	2006
OpenBeacon											
OpenCola											
OpenEEG											
openenergymonitor	x		3	x						UK	2009
openEyes											
OM650	x		1					x		D	2000
OpenMoko											
OpenPCD											
OpenRemote	x		3			x			x	-	2008
OpenServo	x		3		x					-	-
OpenSpace	x		3	x						US	2009
OpenSPARC											
OpenWrt	x		4	x						-	-
OScar project											
PC Engines											
Rallylog											
Ravelry	x		4					x		US	
RepRap	x		2	x						UK	2004
RFID door opener											
RiverSimple	x		2			x				UK	2008
RONJA			4	x						CZ	
Sanguino	x		3			x				US	2008
Semitone Dimmers											
SCA	x		4			x					
solar tracking	x		3					x		CA	2008
Spiffchorder											
SquidBee	x		4			x			x	E	-
Stribe											
Stroblt Triggrr											
Thingiverse	x		4			x					2008
Traxmod											
zeroclock											
Zoybar											

Tab. 7: project details of OIP entries treated by OSHWL (3/3)

title	entry type		dev. status	licences and TM	country	start year
	collection of projects	single project				

Tab. 8: project details of OSHWL projects not listed by OIP

3 Product details

First, a description of the categories in the tables directly following.

product innovativeness degree of innovativeness according to the following criteria:

- 5 radical innovation - a new technology that results in a new market infrastructure, e.g. an innovation which does not address a recognized demand but instead creates a demand previously unrecognized by the consumer
- 4 really new innovation - a really new product results in a market discontinuity or a technological discontinuity but will not incorporate both, e.g., new product lines, product line extensions with new technology, or new markets with existing technology
- 3 discontinuous innovations - new technologies that don't lead to discontinuity in existing markets
- 2 incremental innovations - products that provide new features, benefits, or improvements to the existing technology in the existing market
- 1 imitative innovations - imitative products are frequently new to the firm, but not new to the market

product complexity degree of complexity for the developed product ranging between the following:

- 1 low complexity, e.g. a simple wooden chair
- ...
- 5 high complexity, e.g. an aircraft or a nuclear power plant

industry suitable industry from a list given by OIP.

Tables

title	innovativeness	complexity	industry													
			Energy and Utilities	Pharma and Healthcare	IT Hardware	Education and Research	Consumer Goods	Machinery	Automotive	Consumer Electronics	Construction	Media and Culture	Entertainment	Telecommunications	Food and Beverages	Other
3G Stoves	5	2	x													
Absorber Roof	3	3	x													
AW	4	2		x												
Agua Clara	2	4	x													
Akvo	4	3	x													
AITB																
Arduino	2	3			x											
Atari Coldfire																
AOSM																
AVR BL	3	2				x										
AVR M																
AX84 Firefly																
Balloon	2	2			x											
Beagle Board	4	3									x					
Ben NanoNote	2	4									x					
Biobricks																
BFB																
Brewtopia																
CLED	5	1	x													
COSO	5	3				x										
Chumby																
Contraptor	3	2				x										
Craftster	4	2					x									
Crypto Stick																
Cubespawn	2	4						x								
Daisy MP3																
diy_efi	2	2							x							
Elphel																
Ethernut	2	3			x											
Etherrape	-	-			x											
Fab Camera																
Fab@Home	4	4			x											
Flash-Plaice	3	2			x											
Fnordlicht																
Formica																

Tab. 9: product details of OIP entries treated by OSHWL (1/3)

title	innovativeness	complexity	industry											
			Energy and Utilities	Pharma and Healthcare	IT Hardware	Education and Research	Consumer Goods	Machinery	Automotive	Consumer Electronics	Construction	Media and Culture	Entertainment	Telecommunications
Free Art Bureau	4	3				x								
Free Beer														
Freeduino	2	3			x									
Gumstix	4	3			x									
HD Video Capture														
Hexayurt														
Im-FFeeder	2	2				x								
IP04														
IP08														
iRobot														
K People	2	2												x
LED Stripe														
Linux omap														
Local Motors	4	4							x					
MakerBot														
Mikrokopter														
Milkymist														
MISA														
MyOpenRouter														
Neuros Link														
Neuros OSD														
Niftymitter														
oBiCo	3	3								x				
OMFootCtrl														
OLPC														
OAN	5	3									x			
O. Garments	2	1				x								
O. Moto X	1	3							x					
O. Pandora														
OPP														
OS Cookbook	2	1										x		
OS Ecology	5	5						x						
OSWM	4	2						x						

Tab. 10: product details of OIP entries treated by OSHWL (2/3)

title	innovativeness	complexity	industry											
			Energy and Utilities	Pharma and Healthcare	IT Hardware	Education and Research	Consumer Goods	Machinery	Automotive	Consumer Electronics	Construction	Media and Culture	Entertainment	Telecommunications
OWbP														
OS BHKW	2	4	x											
OpenBeacon														
OpenCola														
OpenEEG														
openenergymonitor	3	2	x											
openEyes														
OM650	2	4											x	
OpenMoko														
OpenPCD														
OpenRemote	3	2								x				
OpenServo	4	4						x						
OpenSpace	2	2				x								
OpenSPARC														
OpenWrt	2	1		x										
OScar project														
PC Engines														
Rallylog														
Ravelry	3	1					x							
RepRap	5	4			x									
RFID door opener														
RiverSimple	3	5							x					
RONJA													x	
Sanguino	2	3		x										
Semitone Dimmers														
SCA														x
solar tracking	5	1	x											
Spiffchorder														
SquidBee	5	3		x										
Stribe														
Stroblt Trigr												x		
Thingiverse	5	3												
Traxmod														
zeroclock														
Zoybar														

Tab. 11: product details of OIP entries treated by OSHWL (3/3)

title	innovativeness	complexity	industry
			Energy and Utilities
			Pharma and Healthcare
			IT Hardware
			Education and Research
			Consumer Goods
			Machinery
			Automotive
			Consumer Electronics
			Construction
			Media and Culture
			Entertainment
			Telecommunications
			Food and Beverages
			Other

Tab. 12: product details of OSHWL projects not listed by OIP

4 Institutional design and production

First, a description of the categories in the table directly following.

contribution

user whether private persons or users are actively involved in the development.

commercial whether commercial companies are actively involved in the development.

research whether research institutions are actively involved in the development.

type of collaboration

collective development of...

one common product if a community is commonly developing one product.

several common products if a community is commonly developing several different products.

published knowledge...

with some coll. dev. if instructions or ideas are published and others make comments and suggestions.

without collective dev. if information is purely revealed.

degree of openness (radicalized from OIP's version) / entirety of openness Whether or not the project is revealing all available information.

production entity responsible for production. "related company or assoc." refers to an entity closely related to the project or with a production mandate. "outsourced" is whenever an external party is paid for supplying components.

Tables

title	contribution			type of collab.				entirety of openness	product produced by							
	user/private	commercial	research	c. d. one c. p.	c. d. several c. p.	p. k. w/ c. d.	p. k. w/o c. d.		project leader	core team	developer community	user community	related company or association	outsourced	other	not yet clear
3G Stoves	x		x			x			x			x				
Absorber Roof	x					x			x							
AW	x	x	x		x						x					
Agua Clara	x	x	x			x		x					x			
Akvo	x	x	x		x					x						
AITB																
Arduino	x				x					x	x		x			
Atari Coldfire																
AOSM																
AVR BL	x			x				x	x							x
AVR BM																
AX84 Firefly																
Balloon	x	x	x	x									x			
Beagle Board	x	x			x			x					x			
Ben NanoNote	x	x	x		x					x			x			
Biobricks																
BFB																
Brewtopia																
CLED	x						x	x								x
COSO	x	x			x			x		x			x	x		
Chumby																
Contraptor	x					x		x								
Craftster	x	x			x			x			x	x				
Crypto Stick																
Cubespawn	x			x				x	x							
Daisy MP3																
diy_efi	x				x			x			x					
Elphel																
Ethernut	x	x	x		x								x			
Etherrape	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fab Camera																
Fab@Home	x	x	x	x				x		x	x	x	x			
Flash-Plaice	x	x			x					x						
Fjordlicht																
Formica																

Tab. 13: institutional design and production details of OIP entries treated by OSHWL (1/3)

title	contribution			type of collab.	entirety of openness	product produced by						
	user/private	commercial	research			project leader	core team	developer community	user community	related company or association	outsourced	other not yet clear
Free Art Bureau	x	x	x	x	x		x	x	x	x		
Free Beer												
Freeduino	x			x	x					x		
Gumstix	x	x		x						x		
HD Video Capture												
Hexayurt												
Im-FFeeder						x			x			
IP04												
IP08												
iRobot												
K People	x	x	x	x						x		
LED Stripe												
Linux omap												
Local Motors	x	x		x			x			x		
MakerBot												
Mikrokopter												
Milkymist												
MISA												
MyOpenRouter												
Neuros Link												
Neuros OSD												
Niftymitter												
oBiCo	x			x		x						
OMFootCtrl												
OLPC												
OAN	x	x	x	x	x							
O. Garments	x	x		x	x	x						
O. Moto X	x	x	x	x	x				x			
O. Pandora												
OPP												
OS Cookbook	x			x	x				x			
OS Ecology	x	x	x	x	x	x	x	x	x	x	x	
OSWM	x	x	x	x	x							

Tab. 14: institutional design and production details of OIP entries treated by OSHWL (2/3)

title	contribution			type of collab.				entirety of openness	product produced by							
	user/private	commercial	research	c. d. one c. p.	c. d. several c. p.	p. k. w/ c. d.	p. k. w/o c. d.		project leader	core team	developer community	user community	related company or association	outsourced	other	not yet clear
OWbP																
OS BHKW								x								
OpenBeacon																
OpenCola																
OpenEEG																
openenergymonitor	x					x		x	x							
openEyes																
OM650	x	x					x								x	
OpenMoko																
OpenPCD																
OpenRemote	x	x		x												x
OpenServo	x	x			x			x					x			
OpenSpace	x		x	x				x	x			x				
OpenSPARC																
OpenWrt	x			x					-	-	-	-	-	-	-	-
OScar project																
PC Engines																
Rallylog																
Ravelry	x	x				x		x	x	x	x	x				
RepRap	x		x	x				x	x	x	x					
RFID door opener																
RiverSimple	x	x	x	x										x		
RONJA							x									
Sanguino	x					x		x	x					x		
Semitone Dimmers																
SCA	x				x			x			x	x				
solar tracking	x						x	x								
Spiffchorder																
SquidBee	x	x	x	x				x							x	
Stribe																
Stroblt Triggrr																
Thingiverse	x					x		x			x	x				
Traxmod																
zeroclock																
Zoybar																

Tab. 15: institutional design and production details of OIP entries treated by OSHWL (3/3)

title	contribution	type of collab.	product produced by	
	user/private commercial research	c. d. one c. p. c. d. several c. p. p. k. w/ c. d. p. k. w/o c. d.	entirety of openness project leader core team developer community user community related company or association outsourced other not yet clear	

Tab. 16: institutional design and production details of OSHWL projects not listed by OIP