Open Innovation Projects

Website's content (partial) in one document

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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:

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	
AVR Butterfly MP3 (AVR BM)	audio-visual	
AX84 Firefly	audio-visual	
Balloon	electro-it-monit	
Beagle Board	electro-it-monit	
Ben NanoNote	electro-it-monit	
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	
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	
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 Triggr	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 OSHW(L) projects, not listed by OIP (table 4):

title	OSHWL path	keywords

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 table 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.

community size   approximate community size or number of users involved.

number of developers   approximate number of active developers.

Tables

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

Tab. 5: project details (1/2) of OIP entries treated by OSHWL (1/3)

title	community size								developers						
	1	2-5	6-10	11-100	101-500	501-1000	1001-5000	>5000	1	2-5	6-10	11-100	101-500	501-1000	>1000
3G Stoves								x	x						
Absorber Roof	x								x						
AW				x								x			
Agua Clara			x									x			
Akvo					x						x				
AITB															
Arduino							x								
Atari Coldfire															
AOSM															
AVR BL															
AVR BM															
AX84 Firefly															
Balloon															
Beagle Board															
Ben NanoNote															
Biobricks															
BFB															
Brewtopia															
CLED	x								x						
COSO		x									x				
Chumby															
Contraptor		x							x						
Craftster							x								x
Crypto Stick															
Cubespawn					x				x						
Daisy MP3															
diy_efi			x									x			
Elphel															
Ethernut															
Etherrape															
Fab Camera															
Fab@Home					x							x			
Flash-Plaice															
Fnordlicht															
Formica															

Tab. 6: project details (2/2) of OIP entries treated by OSHWL (1/3)

title	entry type		dev. status	licence and TM								country	start year
	coll. of proj.	single proj.		GPL, LGPL or similar copyleft license	BSD, MIT or similar permissive license	Creative Commons license	Creative Commons license	other open license	commercial license	no license	registered trademark		
Free Art Bureau	x		4	x								F	2011
Free Beer													
Freeduino													
Gumstix													
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. 7: project details (1/2) of OIP entries treated by OSHWL (2/3)

title	community size								developers						
	1	2-5	6-10	11-100	101-500	501-1000	1001-5000	>5000	1	2-5	6-10	11-100	101-500	501-1000	>1000
Free Art Bureau			x							x					
Free Beer															
Freeduino															
Gumstix															
HD Video Capture															
Hexayurt															
Im-FFeeder		x							x						
IP04															
IP08															
iRobot															
K People			x							x					
LED Stripe															
Linux omap															
Local Motors				x											
MakerBot															
Mikrokopter															
Milkymist															
MISA															
MyOpenRouter															
Neuros Link															
Neuros OSD															
Niftymitter															
oBiCo		x								x					
OMFootCtrl															
OLPC															
OAN							x								x
O. Garments													x		
O. Moto X	x								x						
O. Pandora															
OPP															
OS Cookbook															
OS Ecology							x			x					
OSWM															

Tab. 8: project details (2/2) of OIP entries treated by OSHWL (2/3)

title	coll. of proj.	single proj.	dev. status	GPL, LGPL or similar copyleft license	BSD, MIT or similar permissive license	Creative Commons license	Creative Commons license	other open license	commercial license	no license	registered trademark	country	start year
OWbP													
OS BHKW			2							x		D	2006
OpenBeacon													
OpenCola													
OpenEEG													
openenergymonitor													
openEyes													
OM650	x		1							x		D	2000
OpenMoko													
OpenPCD													
OpenRemote													
OpenServo	x		3		x								
OpenSpace	x		3	x								US	2009
OpenSPARC													
OpenWrt													
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													
Semitone Dimmers													
SCA	x		4			x							
solar tracking	x		3							x		CA	2008
Spiffchorder													
SquidBee													
Stribe													
Stroblt Triggr													
Thingiverse	x		4			x							2008
Traxmod													
zeroclock													
Zoybar													

Tab. 9: project details (1/2) of OIP entries treated by OSHWL (3/3)

title	community size								developers						
	1	2-5	6-10	11-100	101-500	501-1000	1001-5000	>5000	1	2-5	6-10	11-100	101-500	501-1000	>1000
OWbP															
OS BHKW				x											
OpenBeacon															
OpenCola															
OpenEEG															
openenergymonitor															
openEyes															
OM650										x					
OpenMoko															
OpenPCD															
OpenRemote															
OpenServo								x							
OpenSpace		x								x					
OpenSPARC															
OpenWrt															
OScar project															
PC Engines															
Rallylog															
Ravelry							x								
RepRap			x									x			
RFID door opener															
RiverSimple		2									x				
RONJA															
Sanguino															
Semitone Dimmers															
SCA							x								
solar tracking	x								x						
Spiffchorder															
SquidBee															
Stribe															
Stroblt Triggr															
Thingiverse															
Traxmod															
zeroclock															
Zoybar															

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

title	entry type		dev. status	licence and TM								country	start year
	coll. of proj.	single proj.		GPL, LGPL or similar copyleft license	BSD, MIT or similar permissive license	Creative Commons license	Creative Commons license	other open license	commercial license	no license	registered trademark		

Tab. 11: project details (1/2) of OSHWL projects not listed by OIP

title	community size								developers						
	1	2-5	6-10	11-100	101-500	501-1000	1001-5000	>5000	1	2-5	6-10	11-100	101-500	501-1000	>1000

Tab. 12: project details (2/2) of OSHWL projects not listed by OIP

3 Product details

First, a description of the categories in the table 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   discontinous 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																
AVR M																
AX84 Firefly																
Balloon																
Beagle Board																
Ben NanoNote																
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																
Etherrape																
Fab Camera																
Fab@Home	4	4			x											
Flash-Plaice																
Fnordlicht																
Formica																

Tab. 13: 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	Food and Beverages	Other
Free Art Bureau	4	3				x										
Free Beer																
Freeduino																
Gumstix																
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. 14: product details of OIP entries treated by OSHWL (2/3)

title	innovativeness	complexity	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
OWbP																
OS BHKW	2	4	x													
OpenBeacon																
OpenCola																
OpenEEG																
openenergymonitor																
openEyes																
OM650	2	4											x			
OpenMoko																
OpenPCD																
OpenRemote																
OpenServo	4	4						x								
OpenSpace	2	2				x										
OpenSPARC																
OpenWrt																
OScar project																
PC Engines																
Rallylog																
Ravelry	3	1					x									
RepRap	5	4			x											
RFID door opener																
RiverSimple	3	5							x							
RONJA														x		
Sanguino																
Semitone Dimmers																
SCA															x	
solar tracking	5	1	x													
Spiffchorder																
SquidBee																
Stribe																
Stroblt Triggr												x				
Thingiverse	5	3														
Traxmod																
zeroclock																
Zoybar																

Tab. 15: 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. 16: 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																
AVR BM																
AX84 Firefly																
Balloon																
Beagle Board																
Ben NanoNote																
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																
Etherrape																
Fab Camera																
Fab@Home	x	x	x	x				x			x	x	x	x		
Flash-Plaice																
Fnordlicht																
Formica																

Tab. 17: institutional design and production details of OIP entries treated by OSHWL (1/3)

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title	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
	contribution			type of collab.					product produced by						
Free Art Bureau	x	x	x	x				x		x	x	x	x		
Free Beer															
Freeduino															
Gumstix															
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. 18: 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
OWbP															
OS BHKW								x							
OpenBeacon															
OpenCola															
OpenEEG															
openenergymonitor															
openEyes															
OM650	x	x					x								x
OpenMoko															
OpenPCD															
OpenRemote															
OpenServo	x	x			x			x					x		
OpenSpace	x		x	x				x	x		x				
OpenSPARC															
OpenWrt															
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															
Semitone Dimmers															
SCA	x				x			x			x	x			
solar tracking	x					x		x							
Spiffchorder															
SquidBee															
Stribe															
Stroblt Triggr															
Thingiverse	x					x		x			x	x			
Traxmod															
zeroclock															
Zoybar															

Tab. 19: institutional design and production details of OIP entries treated by OSHWL (3/3)

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

Tab. 20: institutional design and production details of OSHWL projects not listed by OIP