OPEN SOURCE SOFTWARE CATALOGUE

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Abstract

This document is intended as a catalogue of Open Source software that can be consulted by any project, LSP (Large Scale Pilot) or use case in order to search for the proper O.S software for its developments. It is part of the effort of the OPEN DEI project to provide tools for pilots/use cases as part of task T8.4.

Prepared for:

European Parliament

Directorate-General Internal Policies

Directorate G - Impact Assessment and European Added Value

CONTENTS

1 EXECUTIVE SUMMARY

The following document is part of the effort of the Task 8.4 from Work Package 8 of the OPEN DEI project to provide useful tools for the daily work of projects, pilots and/or use cases. It is intended as a catalogue of Open Source software that can be consulted by anyone in order to search for the proper O.S software for its developments and/or architecture design. It is a starting point with basic information that will try to guide readers to the proper direction in order to save them time when searching for OSS.

The catalogue is divided in several sections, each one corresponding to some specific software category as follows:

- Security
- Containerization
- IoT
- APIs
- Building blocks
- Code quality/Integration
- Collaboration tools
- Communication tools
- Dashboards
- Programming

- Data management
- Design tools
- Diagram design tools
- Enablers
- Methodologies
- Paradigms
- Platforms
- Solutions
- Standards

Inside of each of the sections listed above, there is a list of all mapped software, including some basic data such as its name, a basic description about its main functionalities and a link to the official website of the software. Further categories and/or software may be added in future versions of the catalogue.

Readers can request additional information about OPEN DEI and the main objectives of the project in the OPEN DEI official website.

2 SECURITY

This section describes some of the main security software available in the market that is suitable to be used by any LSP (Large Scale Pilot).

NAME	Forseti Security
DESCRIPTION	Forseti Security is an O.S. tool that is used by Google with the aim of improving the security of the Google Cloud platform.
LINK	http://forsetisecurity.org/

NAME	Kali Linux
DESCRIPTION	Kali Linux is an GPL licensed linux distribution intended for penetration detecting and testing.
LINK	https://www.kali.org/

NAME	Metron
DESCRIPTION	Metron is a security framework for Hadoop that was created by Apache under Apache license 2.0 with the objective of detecting/solving security problems.
LINK	http://metron.apache.org/

NAME	OSSEC
DESCRIPTION	OSSEC is an O.S. tool intended to detect intrusions.
LINK	https://www.ossec.net/

NAME	Ranger
DESCRIPTION	Ranger is a framework created by the Apache Foundation under A.L 2.0 intended for managing/monitoring data security in Hadoop.
LINK	http://ranger.apache.org/

NAME	Google application security tools
DESCRIPTION	Google application security tools is an Open Source set of tools intended for security testing.
LINK	https://www.google.com/about/appsecurity/tools

NAME	Shiro
DESCRIPTION	Shiro is a Java security framework created by Apache under A.L 2.0 and intended for session management, cryptography and authentication.
LINK	http://shiro.apache.org/

NAME	ClamAV
DESCRIPTION	ClamAV is an O.S. antivirus.
LINK	http://clamav.net/

NAME	Security Onion
DESCRIPTION	Security Onion is an O.S linux version focused on security.
LINK	http://blog.securityonion.net/

NAME	mailscanner
DESCRIPTION	mailscanner is an Open source security mail scanner.
LINK	https://www.mailscanner.info/

NAME	OPNSense
DESCRIPTION	OPNSense is an O.S. firewall.
LINK	https://opnsense.org/

NAME	Wfuzz
DESCRIPTION	Wfuzz is a tool intended for penetration detection available under GPL 2.0 license
LINK	http://code.google.com/p/wfuzz

NAME	Snort
DESCRIPTION	Snort is an Open Source intrusion detector tool.
LINK	http://snort.org/

NAME	Wapiti
DESCRIPTION	Wapiti is a vulnerabilities detector for the web distributed under GNUPL 2.0 license.
LINK	http://wapiti.sourceforge.net/

NAME	Zeek
DESCRIPTION	Zeek is an Open source tool intended to monitor security.
LINK	https://zeek.org/

NAME	AuthZForce PDP/PAP
DESCRIPTION	The FIWARE AuthZForce PDP/PAP is an Enabler that uses PDP/PAP and the XACML standard.
LINK	https://authzforce-ce-fiware.rtfd.io/

NAME	badssl.com
DESCRIPTION	badssl.com. is a site created and maintained by Google which aim is testing browsers and clients against subdomains.
LINK	https://badssl.com/

NAME	KeyCloak
DESCRIPTION	KeyCloak is an Open Source tool released in 2014 under Apache License 2.0 intended for managing access control in apps.
LINK	https://www.keycloak.org/

NAME	Keyrock
DESCRIPTION	The FIWARE Keyrock is an Identity Manager that uses OAuth2 and user profiles.
LINK	https://fiware-idm.readthedocs.io/en/latest/

NAME	Santuario
DESCRIPTION	Santuario is an implementation of the security standards for the XML format created by the Apache Foundation under Apache license 2.0.
LINK	http://santuario.apache.org/

NAME	Sentry
DESCRIPTION	Sentry is a security system created by Apache under A.L 2.0 and intended for applying role authorizations to data/metadata in Hadoop.
LINK	http://sentry.apache.org/

NAME	WSO2 Identity Server
DESCRIPTION	The WSO2 Identity Server is an O.S. tool that controls user access to apps using SAML/OIDC standards.
LINK	https://wso2.com/identity-and-access-management/

3 IOT

This section describes some of the main IoT software available in the market that is suitable to be used by any LSP (Large Scale Pilot).

NAME	Orchestra Cities
DESCRIPTION	FIWARE Orchestra Cities is a IoT software intended to manage Smart Cities.
LINK	https://marketplace.fiware.org/pages/solutions/c8a29a1f62a688fa58d8bc8d

NAME	Mozilla Web of Thing Websocket Streaming API
DESCRIPTION	Mozilla Web of Thing Websocket Streaming API is an API draft intended to provide a WebSocket service to the Web of Things.
LINK	https://developer.mozilla.org/es/docs/Web/API/WebSockets_API

NAME	WebRTC
DESCRIPTION	WebRTC is a framework created by Google under A.L 2.0 license that allows communication in mobile platforms, browsers and IoT.
LINK	https://www.webrtc.org/

NAME	IoTDB
DESCRIPTION	IoTDB is a database that is designed for edge/cloud that was created by Apache under Apache license 2.0 that is intended for being used with IoT.
LINK	http://iotdb.apache.org/

NAME	Arduino Cloud IoT
DESCRIPTION	Arduino Cloud IoT is a Cloud service intended to connect IoT devices. It is available under A.L 2.0
LINK	https://docs.arduino.cc/cloud/iot-cloud

NAME	SENSIoT
DESCRIPTION	SENSIoT is a smart environmental service with IoT based on FIWARE
LINK	https://marketplace.fiware.org/pages/solutions/666207c189d5917064754e8f

NAME	Yggio
DESCRIPTION	Yggio IoT is an interoperability platform for smart cities and smart buildings based on FIWARE standards.
LINK	https://marketplace.fiware.org/pages/solutions/cfe25e8bc8220d0993a1aaf3

NAME	IoT Agent for JSON
DESCRIPTION	FIWARE IoT Agent for JSON is a bridge between HTTP/NGSI/MQTT
LINK	https://fiware-iotagent-json.rtfd.io/

NAME	IoT Agent for LoRaWAN
DESCRIPTION	FIWARE IoT Agent for LoRaWAN is a bridge between LoRaWAN and NGSI
LINK	https://fiware-lorawan.rtfd.io/

NAME	IoT Agent for LWM2M
DESCRIPTION	FIWARE IoT Agent for LWM2M is a M2M-NGSI bridge
LINK	https://fiware-iotagent-lwm2m.rtfd.io/

NAME	IoT Agent for OPC-UA
DESCRIPTION	FIWARE IoT Agent for OPC-UA is a bridge between OPC and NGSI
LINK	https://iotagent-opcua.rtfd.io/

NAME	IoT Agent for Sigfox
DESCRIPTION	FIWARE IoT Agent for Sigfox is a Sigfox-NGSI bridge.
LINK	https://iotagent-sigfox.rtfd.io/

NAME	IoT Agent for Ultralight
DESCRIPTION	FIWARE IoT Agent for Ultralight is a bridge between HTTP/MQTT and NGSI
LINK	https://fiware-iotagent-ul.rtfd.io/

NAME	IoT Agent library
DESCRIPTION	FIWARE IoT Agent library is a library designed to develop an IoT Agent.
LINK	https://iotagent-node-lib.rtfd.io/

NAME	Oliot
DESCRIPTION	FIWARE Oliot is an Enabler intended to translate data from NGSI to EPCIS.
LINK	https://github.com/yalewkidane/FIWARE_EPCIS_Mediation_Gateway

NAME	MainFlux
DESCRIPTION	MainFlux is an O.S. platform for IoT edge computing.
LINK	https://mainflux.com/

NAME	MASAI
DESCRIPTION	FIWARE MASAI is a data software intended to gather data from IoT devices.
LINK	https://marketplace.fiware.org/pages/solutions/5a6bac60ffca24dd063170ca

NAME	WiTraC
DESCRIPTION	FIWARE WiTraC is a tracking tool for IoT designed for Smart Cities and Industry 4.0.
LINK	https://marketplace.fiware.org/pages/solutions/f9f7f04ac43ec77d9a436a68

NAME	Thinger.io
DESCRIPTION	Thinger.io is an Open Source IoT platform designed to connect IoT devices.
LINK	https://thinger.io/

NAME	FogFlow
DESCRIPTION	FIWARE FogFlow is an IoT framework designed to support flows in the cloud.
LINK	https://fogflow.rtfd.io/

NAME	PLC4X
DESCRIPTION	PLC4X is a set of O.S IoT libraries created by Apache designed to interconnect industrial controllers.
LINK	https://plc4x.apache.org/

4 CONTAINERIZATION

This section describes some of the main containerization software available in the market that is suitable to be used by any LSP (Large Scale Pilot).

NAME	Docker
DESCRIPTION	Docker is an Open Source software intended for containerization of environments. It is available under Apache license 2.0
LINK	https://www.docker.com/

NAME	OKD
DESCRIPTION	OKD is an open-source containerization cloud platform designed by Apache under Apache license 2.0.
LINK	https://www.okd.io/

NAME	Portainer CE
DESCRIPTION	Portainer CE is an Open Source tool designed to manage containers.
LINK	https://www.portainer.io/

NAME	Kubernetes
DESCRIPTION	Kubernetes is an O.S. platform designed to deploy containers.
LINK	https://kubernetes.io/

NAME	Apache Mesos
DESCRIPTION	Apache Mesos is an O.S. platform for containerization in clusters. It is published under A.L 2.0
LINK	https://mesos.apache.org/

5 APIS

This section describes many of the main APIs available in the market that are suitable to be used by any LSP (Large Scale Pilot).

NAME	APISIX
DESCRIPTION	APISIX is an O.S API gateway based on Nginx and etcd intended for managing web traffic.
LINK	http://apisix.apache.org/

NAME	BrAPI Breeding REST API
DESCRIPTION	BrAPI Breeding REST API is an Open Source API designed to bring interoperability to a plant breeding DB.
LINK	https://brapi.org/

NAME	Cloudify REST API
DESCRIPTION	Cloudify REST API is an Open Source API intended to give access to several APIs such as blueprints or deployments.
LINK	https://cloudify.co/

NAME	Cordra Indirect API
DESCRIPTION	Cordra Indirect API is an Open Source API intended to manage data in NOSQL databases.
LINK	https://www.cordra.org/documentation/introduction/introduction.html

NAME	Dataverse Project SWORD REST API
DESCRIPTION	Dataverse Project SWORD REST API is an O.S. API intended to allow users to save files in the Dataverse cloud service. It is available under Apache license 2.0
LINK	http://guides.dataverse.org/en/latest/api/sword.html

NAME	Digitransit HSL Map REST API
DESCRIPTION	Digitransit HSL Map REST API is an API intended to provide POI and city images. It is available under CC 4.0 license
LINK	https://digitransit.fi/en/developers/apis/3-map-api

NAME	FarmBot REST API v1.0
DESCRIPTION	FarmBot REST API v1.0 is an Open Source API intended to manage mail, security and data validation/storage.
LINK	https://developer.farm.bot/docs/rest-api

NAME	APInf
DESCRIPTION	FIWARE APInf API is a software intended to administer API's. It is available under EUPL 1.1 license.
LINK	https://github.com/apinf/platform

NAME	Grafeas
DESCRIPTION	Grafeas is an API specification created by Google under Apache license 2.0 with the aim of managing metadata about software resources such as V.Ms, scripts or JARs.
LINK	https://grafeas.io/

NAME	Idra
DESCRIPTION	FIWARE Idra is a tool that is intended to manage Open D.M systems. It is available under AGPL 3.0 license.
LINK	https://idra.rtfd.io/

NAME	Jackrabbit
DESCRIPTION	Jackrabbit is a version of the JAVA Content Repo. It was created by Apache under A.L 2.0 and is intended for storing structured and/or unstructured content.
LINK	http://jackrabbit.apache.org/jcr/index.html

NAME	Juneau
DESCRIPTION	Juneau is a Java tool created by Apache under Apache license 2.0 and intended for clasifying POJOs, supporting RDF and providing a REST API.
LINK	http://juneau.apache.org/#about.html

NAME	Mozilla Web of Thing Websocket Streaming API
DESCRIPTION	Mozilla Web of Thing Websocket Streaming API is an API draft intended to provide a WebSocket service.
LINK	https://developer.mozilla.org/es/docs/Web/API/WebSockets_API

NAME	Open Food Network REST API
DESCRIPTION	Open Food Network REST API is an Open Source API intended for selling food products online.
LINK	https://www.openfoodnetwork.org/software-platform/

NAME	Orion Context Broker
DESCRIPTION	FIWARE Orion Context Broker is a REST API available under the AGPL 3.0 license and intended to update the context.
LINK	https://github.com/telefonicaid/fiware-orion/

NAME	OSRM REST API v1
DESCRIPTION	OSRM REST API v1 is an Open Source API intended to recover paths in roads.
LINK	http://project-osrm.org/docs/v5.5.1/api/#general-options

NAME	Reconmap REST API v0.7.0
DESCRIPTION	Reconmap REST API v0.7.0 is an Open Source API intended for manipulating data in mobile applications.
LINK	https://github.com/Reconmap

NAME	Rosetta RPC API v1.3.1
DESCRIPTION	Rosetta RPC API v1.3.1 is an Open Source API intended to manage blockchain.
LINK	https://www.rosetta-api.org/docs/node_api_introduction.html

NAME	SwiftShader
DESCRIPTION	SwiftShader is an implementation of the OpenGL/Direct3D 9 graphics APIs that was created by Google under Apache license 2.0 and intended for providing 3D graphics.
LINK	https://swiftshader.googlesource.com/SwiftShader

NAME	TensorFlow API
DESCRIPTION	TensorFlow API is an Open Source API intended for machine learning.
LINK	https://www.tensorflow.org/api_docs/

NAME	WS02 API Manager
DESCRIPTION	API Manager is an Open Source API platform intended for management developed by WS02 that provides secure access/microservices.
LINK	https://wso2.com/api-management/

6 BUILDING BLOCKS

This section describes some of the main Building blocks available in the market that are suitable to be used by any LSP (Large Scale Pilot).

NAME	Context Broker - BDTI Integration
DESCRIPTION	The FIWARE Context Broker - BDTI Integration is a software intended to connect OCB with Cygnus and save data. It is available under EUPL 1.2 license.
LINK	https://marketplace.fiware.org/pages/solutions/ea4e02517aad394862de02a1

NAME	Context Broker Data Visualisation
DESCRIPTION	The FIWARE Context Broker Data Visualisation is an enabler intended to provide visualization for the Context Broker. It is available under EUPL v1.2 license.
LINK	https://marketplace.fiware.org/pages/solutions/a175375c8a026c391cb775c6

NAME	Context Broker - EDP Integration
DESCRIPTION	The FIWARE Context Broker EDP is a tool intended to share information from several fonts in the EU portal. It is available under EUPL 1.2 license.
LINK	https://marketplace.fiware.org/pages/solutions/b85deaaef49c6c34ff830a0b

7 CODE QUALITY/INTEGRATION

This section describes many of the main Code quality/Integration tools available in the market that are suitable to be used by any LSP (Large Scale Pilot).

NAME	Allura
DESCRIPTION	Allura is an Open Source website intended for managing code repositories, discussions, and bugs.
LINK	http://allura.apache.org/

NAME	Archiva
DESCRIPTION	Archiva is a repository manager created by Apache under Apache license 2.0 intended for managing the files generated by tools such as Maven/Ant.
LINK	http://archiva.apache.org/

NAME	Bloodhound
DESCRIPTION	Bloodhound is an Open Source tool created by Apache intended for managing tasks, features and bugs of software.
LINK	http://bloodhound.apache.org/

NAME	Buildbot
DESCRIPTION	Buildbot is an O.S integration tool that automates compilation. It was developed by Brian Warner and was firstly released in 2003.
LINK	https://www.buildbot.net/

NAME	Codestriker
DESCRIPTION	Codestriker is an open source online tool intended for code revision that can be integrated with many other tools such as CVS/Subversion. It is property of David Sitsky.
LINK	http://codestriker.sourceforge.net/

NAME	Copybara
DESCRIPTION	Copybara is a tool designed to manage code repositories that was created by Google under Apache license 2.0.
LINK	https://github.com/google/copybara

NAME	Gerrit
DESCRIPTION	Gerrit is an online collaboration tool for code developed by Google under Apache license that can be integrated with Git.
LINK	https://www.gerritcodereview.com/

NAME	Go
DESCRIPTION	Go is an integration tool that allows visualizing code schemas/workflows. It was developed by ThoughtWorks Inc. under Apache License 2.0
LINK	https://www.gocd.org/

NAME	Gump
DESCRIPTION	Gump is a Python integration tool created by Apache under A.L 2.0 that can be integrated with Ant/Maven.
LINK	http://gump.apache.org/

NAME	Integrity
DESCRIPTION	Integrity is an integration tool based on Ruby. It was created by Nicolas Sanguinetti and Simon Rozet under MIT license.
LINK	http://integrity.github.io/

NAME	Jackrabbit
DESCRIPTION	Jackrabbit is a version of the Content Repository for Java created by Apache under Apache license 2.0 and intended for storing structured/unstructured content.
LINK	http://jackrabbit.apache.org/jcr/index.html

NAME	Jenkins
DESCRIPTION	Jenkins is an O.S server intended for software development. It was developed by Kohsuke Kawaguchi and was firstly released in 2011.
LINK	https://jenkins.io/

NAME	JMeter
DESCRIPTION	JMeter is an Open Source app created by Apache and intended for measuring code performance. It is available under Apache license 2.0
LINK	https://jmeter.apache.org/

NAME	Logging
DESCRIPTION	Logging is a set of Open Source tools created by Apache and intended for managing the logging of apps.
LINK	http://logging.apache.org/

NAME	MOE: Make Open Easy
DESCRIPTION	MOE: Make Open Easy is a system created by Google under A.L 2.0 that is intended for managing repos synchronization and scrubbing.
LINK	https://github.com/google/moe

NAME	Reviewable
DESCRIPTION	Reviewable is a tool for code revision with board discussion. It has an Open Source version and is designed by Ideanest LLC.
LINK	https://reviewable.io/

NAME	SonarQube
DESCRIPTION	SonarQube is an open source platform for code management created by SonarSource and released in 2006.
LINK	http://sonarqube.org/

NAME	Subversion
DESCRIPTION	Subversion is a system intended for code versions management created by the Apache Foundation under Apache license.
LINK	http://subversion.apache.org/

8 COLLABORATION TOOLS

This section describes many of the main Collaboration tools available in the market that are suitable to be used by any LSP (Large Scale Pilot).

NAME	Drupal
DESCRIPTION	Drupal is an open source web management tool designed by the Drupal community and released in 2001.
LINK	https://www.drupal.org/

NAME	Guacamole
DESCRIPTION	Guacamole is an O.S remote gateway for desktop created by the Apache Foundation under A.L 2.0 that supports RDP, SSH and VNC protocols.
LINK	http://guacamole.apache.org/

NAME	Incubator
DESCRIPTION	Incubator is a set of services created by Apache under A.L 2.0 and intended for helping projects to fit into the the Apache style in order to join the Apache Foundation.
LINK	http://incubator.apache.org/

NAME	James
DESCRIPTION	James is a mail server that runs in the Java Virtual Machine created by Apache under Apache license 2.0.
LINK	http://james.apache.org/index.html

NAME	JSPWiki
DESCRIPTION	JSPWiki is an Open Source WikiWiki tool built with standard JEE components created by the Apache Foundation.
LINK	http://jspwiki.apache.org/

NAME	Kibble
DESCRIPTION	Kibble is a set of tools created by Apache under Apache license 2.0 and intended to collect/visualize activity.
LINK	http://kibble.apache.org/

NAME	ManifoldCF
DESCRIPTION	ManifoldCF is a framework created by Apache under A.L 2.0 which objective is connecting repositories (Sharepoint /EMC).
LINK	http://manifoldcf.apache.org/

NAME	NextCloud
DESCRIPTION	NextCloud is a file sharing tool with group administration. It was designed by Nextcloud under AGPL v3 license and firstly released in 2007.
LINK	https://nextcloud.com/

NAME	OwnCloud
DESCRIPTION	OwnCloud is a file sharing software designed by OwnCloud GmbH under AGPL v3 license and firstly released in 2010.
LINK	https://owncloud.org/

NAME	Petri
DESCRIPTION	Petri is a project created by Apache under Apache license 2.0 which main aim is helping projects to become an Apache project.
LINK	http://petri.apache.org/

NAME	STeVe
DESCRIPTION	STeVe is a Python voting system created by Apache under A.L 2.0 with the aim of managing votings.
LINK	http://steve.apache.org/

NAME	VCL
DESCRIPTION	VCL is an O.S. cloud platform created by Apache that is intended for giving users access to dedicated compute environments.
LINK	http://vcl.apache.org/

9 COMMUNICATION TOOLS

This section describes many of the main Communication tools available in the market that are suitable to be used by any LSP (Large Scale Pilot).

NAME	Kopano core
DESCRIPTION	Kopano core is an Open Source platform that allows collaborative work between teams
LINK	http://kopano.com/

NAME	ActiveMQ
DESCRIPTION	ActiveMQ is a messaging server based on Java that was created by Apache under A.L 2.0 with the aim of providing connectivity to apps.
LINK	http://activemq.apache.org/

NAME	James
DESCRIPTION	James is a mail server that runs in the Java Virtual Machine created by Apache under Apache license 2.0.
LINK	http://james.apache.org/index.html

NAME	Jitsi
DESCRIPTION	Jitsi is an O.S multiplatform app created by Emil Ivov, Inc that allows voice/video calls and chat. It was firstly released in 2003.
LINK	https://jitsi.org/

NAME	Qpid
DESCRIPTION	Qpid is an Open Source multiplatform messaging tool created by the Apache Foundation that uses AMQP.
LINK	http://qpid.apache.org/

NAME	Wire
DESCRIPTION	Wire is an O.S. messaging software that allows audio/video calls.
LINK	https://wire.com/

NAME	SpamAssassin
DESCRIPTION	SpamAssassin is an O.S platform designed by Apache to perform anti-spam tasks such as blocking/filtering mails.
LINK	https://spamassassin.apache.org/

NAME	Mattermost
DESCRIPTION	Mattermost is an Open Source online chat intended for companies.
LINK	https://mattermost.com/

NAME	Zulip
DESCRIPTION	Zulip is an Open Source chat tool with file sharing. It was created by Jeff Arnold in 2012.
LINK	https://zulip.com/

10 DASHBOARDS

This section describes many of the main Dashboards available in the market that are suitable to be used by any LSP (Large Scale Pilot).

NAME	Dashbuilder
DESCRIPTION	Dashbuilder is an O.S Dashboard intended for reporting. It was designed by RedHat and is available under Apache Software License 2.0
LINK	http://dashbuilder.org/

NAME	Grafana
DESCRIPTION	Grafana is a web tool that allows graphs visualization. It was designed by Grafana Labs under GNUPL 3.0 license and released in 2014.
LINK	https://grafana.com/

NAME	Mozaik
DESCRIPTION	Mozaik is a Dashboard based on Nodejs. It was designed by Plouc and is available under MIT License.
LINK	http://mozaik.rocks/

NAME	ReDash
DESCRIPTION	ReDash is an O.S. Dashboard created by Redash Inc. that is designed to be connected with several databases in order to represent data.
LINK	https://redash.io/

NAME	Smashing
DESCRIPTION	Smashing is an O.S. Dashboard based on Sinatra that allows data visualization.
LINK	https://smashing.github.io/

NAME	Stashboard
DESCRIPTION	Stashboard is an O.S. Dashboard intended to be integrated with services. It was created by Twilio and is available under MIT License.
LINK	https://www.stashboard.org/

11 DATA MANAGEMENT

This section describes many of the main Data management tools available in the market that are suitable to be used by any LSP (Large Scale Pilot).

NAME	Accumulo
DESCRIPTION	Accumulo is a key/value storage created by Apache under Apache license 2.0 and intended for providing data storage.
LINK	https://accumulo.apache.org/

NAME	Any23
DESCRIPTION	Any23 is a tool created by Apache under Apache license 2.0 with the aim of extracting structured data from web documents.
LINK	http://any23.apache.org/

NAME	Apache DB
DESCRIPTION	Apache DB is a database created by Apache under A.L 2.0 based on software from the Apache Foundation.
LINK	http://db.apache.org/

NAME	AsterixDB
DESCRIPTION	AsterixDB is an Open Source data management system created by Apache with the aim of managing Big Data.
LINK	http://asterixdb.apache.org/

NAME	Bigtop
DESCRIPTION	Bigtop is a tool created and licensed by Apache with the objective of helping with testing/configuration/packaging of big data.
LINK	http://bigtop.apache.org/

NAME	BookKeeper
DESCRIPTION	BookKeeper is a storage service created by Apache under A.L 2.0 which is tolerant to failures and scalable.
LINK	http://bookkeeper.apache.org/

NAME	Calcite
DESCRIPTION	Calcite is a database created by Apache under Apache license 2.0 which uses standard SQL and has optimized queries.
LINK	https://calcite.apache.org/

NAME	CarbonData
DESCRIPTION	CarbonData is a data format created by Apache under A.L 2.0 and intended for performing analytics on big data platforms.
LINK	http://carbondata.apache.org/

NAME	Cassandra
DESCRIPTION	Cassandra is an O.S. relational database property of the Apache Software Foundation. It was firstly released in 2008.
LINK	http://cassandra.apache.org/

NAME	Clerezza
DESCRIPTION	Clerezza is a pack of libraries for Java created and licensed by Apache intended for managing linked data.
LINK	http://clerezza.apache.org/

NAME	Cosmos
DESCRIPTION	FIWARE Cosmos is an enabler that allows analyzing Big Data in Flink/Spark. It is available under AGPL license 3.0
LINK	https://github.com/ging/fiware-cosmos

NAME	CouchDB
DESCRIPTION	CouchDB is an O.S. NoSQL database designed by the Apache Software Foundation. It was firstly released in 2005.
LINK	http://couchdb.apache.org/

NAME	cTAKES
DESCRIPTION	cTAKES is an O.S processing system for natural language created by Apache with the objective of extracting information from medical files.
LINK	http://ctakes.apache.org/

NAME	Cygnus
DESCRIPTION	FIWARE Cygnus is an enabler that is intended to manage context history. It can be integrated with several databases and is licensed under AGPL v3.0 license.
LINK	https://fiware-cygnus.rtfd.io/

NAME	Draco
DESCRIPTION	FIWARE Draco is a Nifi-based Enabler that is designed to manage context history. It is available under Apache license 2.0
LINK	https://fiware-draco.rtfd.io/

NAME	Drill
DESCRIPTION	Drill is a SQL Query Engine without schema created by Apache under Apache license 2.0 for Hadoop and Cloud Storage.
LINK	http://drill.apache.org/

NAME	Druid
DESCRIPTION	Druid is an analytics database created by Apache Foundation under A.L 2.0 and intended for workflows.
LINK	http://druid.apache.org/

NAME	Empire-db
DESCRIPTION	Empire-db is an O.S component for data persistence and database abstraction created by Apache.
LINK	http://empire-db.apache.org/

NAME	Flink
DESCRIPTION	Flink is a framework created by the Apache Foundation under A.L 2.0 and intended for managing streams of data.
LINK	https://flink.apache.org/

NAME	Flume
DESCRIPTION	Flume is a service created by Apache under Apache license 2.0 intended for storing, moving, and collecting log data.
LINK	http://flume.apache.org/

NAME	Fluo
DESCRIPTION	Fluo is a distributed processing system created by Apache under Apache license 2.0 with the aim of making updates to big datasets.
LINK	https://fluo.apache.org/

NAME	Geode
DESCRIPTION	Geode is a data management tool that was created by Apache under A.L 2.0 with the objective of building high speed data APPs.
LINK	https://geode.apache.org/

NAME	Gora
DESCRIPTION	Gora is an Open Source framework for big data created by Apache and intended for providing persistence and a data model.
LINK	http://gora.apache.org/

NAME	Griffin
DESCRIPTION	Griffin is an O.S. big data tool created by Apache with the aim of measuring data quality.
LINK	http://griffin.apache.org/

NAME	Hadoop
DESCRIPTION	Hadoop is an O.S framework created by the Apache Foundation that is designed to process a big dataset in clusters of computers.
LINK	http://hadoop.apache.org/

NAME	HAWQ
DESCRIPTION	HAWQ is an Open Source SQL database for Hadoop developed by the Apache Foundation.
LINK	http://hawq.apache.org/

NAME	HBase
DESCRIPTION	HBase is an O.S big data database scalable for Hadoop created by the Apache Foundation.
LINK	http://hbase.apache.org/

NAME	Hive
DESCRIPTION	Hive is an O.S data warehouse designed by Apache with the objective of managing large datasets in distributed storages.
LINK	http://hive.apache.org/

NAME	Hudi
DESCRIPTION	Hudi is a tool created by Apache under Apache license 2.0 that is intended for storing datasets in DFS.
LINK	http://hudi.apache.org/

NAME	Iceberg
DESCRIPTION	Iceberg is a type of table for big datasets created by Apache under A.L 2.0 and intended for adding high performance tables to Spark/Presto.
LINK	http://iceberg.apache.org/

NAME	Impala
DESCRIPTION	Impala is an Open Source analytics database for Hadoop developed by the Apache Foundation.
LINK	http://impala.apache.org/

NAME	IoTDB
DESCRIPTION	IoTDB is a database that is designed for edge/cloud that was created by Apache under Apache license 2.0 that is intended for being used with IoT.
LINK	http://iotdb.apache.org/

NAME	JanusGraph
DESCRIPTION	JanusGraph is an O.S version of TITAN database created by Google which main aim is storing graphs.
LINK	http://janusgraph.org/

NAME	Json
DESCRIPTION	Json is a format used to store a Javascript object in plain text. It was firstly developed in 1999.
LINK	https://json.org/

NAME	Json-ld
DESCRIPTION	Json-ld is format used to note linked data with Json and was firstly released in 2010.
LINK	http://www.w3.org/TR/json-ld/

NAME	Kafka
DESCRIPTION	Kafka is an Open Source streaming platform created by Apache and intended for managing streaming, pipelines and integration.
LINK	http://kafka.apache.org/

NAME	Kudu
DESCRIPTION	Kudu is an Open Source tool created by Apache and intended for Hadoop storage in order to allow fast data analytics.
LINK	https://kudu.apache.org/

NAME	Kylin
DESCRIPTION	Kylin is an Open Source Analytical Data Warehouse created by the Apache Foundation under Apache license 2.0 and intended for Big Data OLAP.
LINK	http://kylin.apache.org/

NAME	MADlib
DESCRIPTION	MADlib is an O.S. library for Big Data and machine learning created by the Apache Foundation intended for PostgreSQL/Greenplum.
LINK	http://madlib.apache.org/

NAME	MariaDB
DESCRIPTION	MariaDB is an O.S. database designed by MariaDB Corp. that was firstly released in 2009.
LINK	http://mariadb.com/

NAME	MetaModel
DESCRIPTION	MetaModel is an interface designed by Apache under A.L 2.0 that is intended for exploring and discovering metadata.
LINK	http://metamodel.apache.org/

NAME	Mnemonic
DESCRIPTION	Mnemonic is a library created and licensed by the Apache Foundation and intended for performing hybrid memory storages.
LINK	http://mnemonic.apache.org/

NAME	MongoDB
DESCRIPTION	MongoDB is a database focused on document management that is property of MongoDB Inc. It was firstly released in 2009 and is available under GNU AGPL 3.0
LINK	http://www.mongodb.org/

NAME	mtail
DESCRIPTION	mtail is a tool developed by Google under A.L 2.0 with the objective of extracting metrics and monitoring data from logs.
LINK	https://github.com/google/mtail

NAME	MySQL
DESCRIPTION	MySQL is an O.S. database designed by Sun Microsystems and Oracle Corporation. It was firstly released in 1995.
LINK	http://www.mysql.com/

NAME	OODT
DESCRIPTION	OODT is an O.S. tool created by the Apache Foundation that allows integrating and storing processes/data/metadata.
LINK	http://oodt.apache.org/

NAME	OpenNLP
DESCRIPTION	OpenNLP is a set of tools intended for machine learning that was created by the Apache Foundation under A.L 2.0 to process natural language.
LINK	http://opennlp.apache.org/

NAME	ORC
DESCRIPTION	ORC is a storage for Hadoop created by the Apache Foundation under Apache license 2.0 that includes support for snapshot isolation and ACID transactions.
LINK	https://orc.apache.org/

NAME	Parquet
DESCRIPTION	Parquet is an O.S storage format for Hadoop created by the Apache Foundation.
LINK	http://parquet.apache.org/

NAME	Perkeep
DESCRIPTION	Perkeep is a set of O.S. formats, protocols and software for data available under Apache license 2.0.
LINK	https://perkeep.org/

NAME	Pig
DESCRIPTION	Pig is platform created by the Apache Foundation that is designed to analyze datasets. It is available under Apache license 2.0
LINK	http://pig.apache.org/

NAME	PostgreSQL
DESCRIPTION	PostgreSQL is an O.S. database focused on objects. It is property of PostgreSQL Global Development Group and was firstly released in 1996.
LINK	http://www.postgresql.org/

NAME	QuantumLeap
DESCRIPTION	FIWARE QuantumLeap is an Enabler that is designed to save context data in databases. It is available under MIT license.
LINK	https://github.com/smartsdk/ngsi-timeseries-api/

NAME	Redis
DESCRIPTION	Redis is an O.S. database based on memory that is property of Redis Labs. It was firstly released in 2009.
LINK	http://redis.io/

NAME	RethinkDB
DESCRIPTION	RethinkDB is an open source database focused in document management. It is property of RethinkDB and was firstly released in 2009.
LINK	http://rethinkdb.com/

NAME	Rya
DESCRIPTION	Rya is a Big Data storage created by Apache under A.L 2.0 that is intended for RDF data.
LINK	http://rya.apache.org/

NAME	ShardingSphere
DESCRIPTION	ShardingSphere is an O.S. set of distributed databases created by Apache and intended for providing distributed transactions/data sharding/orchestration.
LINK	http://shardingsphere.apache.org/

NAME	Spark
DESCRIPTION	Spark is an O.S engine created by the Apache Foundation that is intended for processing big amounts of data.
LINK	http://spark.apache.org/

NAME	Spinnaker
DESCRIPTION	Spinnaker is an Open Source platform created by Netflix and Google that is intended for continuous delivery.
LINK	http://www.spinnaker.io/

NAME	SQLite
DESCRIPTION	SQLite is an O.S. relational database, developed by D. Richard Hipp. It was firstly released in 2000.
LINK	http://www.sqlite.org/

NAME	Sqoop
DESCRIPTION	Sqoop is a software created by Apache under Apache license 2.0 intended for transferring bulk data.
LINK	http://sqoop.apache.org/

NAME	STH Comet
DESCRIPTION	FIWARE STH Comet is an Enabler available under AGPL 3.0 license designed to save context data in a MongoDB.
LINK	https://fiware-sth-comet.rtfd.io/

NAME	Superset
DESCRIPTION	Superset is a platform created and licensed by Apache and intended for performing data exploration/visualization.
LINK	https://superset.apache.org/

NAME	Tika
DESCRIPTION	Tika is a tool created by Apache under A.L 2.0 that is intended for detecting/extracting text and metadata from XLS/PPT/PDF files.
LINK	http://tika.apache.org/

NAME	TinkerPop
DESCRIPTION	TinkerPop is an O.S framework created by Apache and intended for creating OLTP and OLAP.
LINK	http://tinkerpop.apache.org/

NAME	Trafodion
DESCRIPTION	Trafodion is a transactional database for Hadoop that was created by the Apache Foundation under A.L 2.0.
LINK	http://trafodion.apache.org/

NAME	UIMA
DESCRIPTION	UIMA is an Open Source framework created by Apache intended for analyzing unstructured information.
LINK	http://uima.apache.org/

NAME	Unomi
DESCRIPTION	Unomi is an Open Source data platform for Java created by Apache with the aim of managing users data and privacy.
LINK	http://unomi.apache.org/

NAME	Vitess
DESCRIPTION	Vitess is a distributed database created by Google under Apache license 2.0 that uses MySQL as a backend and can be run in the cloud.
LINK	http://vitess.io/

NAME	XML
DESCRIPTION	XML is a markup language created by the WWW Consortium in 1999.
LINK	http://www.w3.org/XML

NAME	Zeppelin
DESCRIPTION	Zeppelin is a web notebook created by Apache under Apache license 2.0 that is focused in creating collaborative documents.
LINK	http://zeppelin.apache.org/

NAME	Beam
DESCRIPTION	Beam is an O.S programming model created by Apache with the aim of streaming data processing jobs and implementing batches.
LINK	https://beam.apache.org/

12 DESIGN TOOLS

This section describes many of the main Design tools available in the market that are suitable to be used by any LSP (Large Scale Pilot).

NAME	GIMP
DESCRIPTION	GIMP is an open source software for image manipulation/edition created in 1996 by the GIMP Team.
LINK	https://www.gimp.org/

NAME	Open Images Dataset
DESCRIPTION	Open Images Dataset is a dataset of images created by Google under CC 2.0 and CC 4.0 that has about 9 millions of labeled pictures.
LINK	https://g.co/dataset/open-images

NAME	SwiftShader
DESCRIPTION	SwiftShader is an implementation of the OpenGL and Direct3D 9 graphics APIs created by Google under Apache license 2.0 and intended for providing 3D graphics.
LINK	https://swiftshader.googlesource.com/SwiftShader

13 DIAGRAM DESIGN TOOLS

This section describes many of the main Diagram design tools available in the market that are suitable to be used by any LSP (Large Scale Pilot).

NAME	Cayenne
DESCRIPTION	Cayenne is a tool created by Apache under Apache license 2.0 that is intended for schema/map editing.
LINK	https://cayenne.apache.org/

NAME	Draw.io
DESCRIPTION	Draw.io is a software for diagram/chart design that is property of diagrams.net. It has a desktop/online app that is available under Apache license.
LINK	https://app.diagrams.net/

NAME	Giraph
DESCRIPTION	Giraph is an O.S graph processing tool created by the Apache Foundation that is similar to Google Paper.
LINK	http://giraph.apache.org/

14 ENABLERS

This section describes many of the main Enablers available in the market that are suitable to be used by any LSP (Large Scale Pilot).

NAME	FI-ASSIST
DESCRIPTION	FIWARE FI-ASSIST is an indoor navigator software for ASSIST.
LINK	https://marketplace.fiware.org/pages/solutions/5c48e1d037f08d143452189c

NAME	KNOWAGE
DESCRIPTION	FIWARE Knowage is an O.S data visualization software available under GNU public license.
LINK	https://marketplace.fiware.org/pages/solutions/59611fb5573b7cb51c44ef68

NAME	REPLO
DESCRIPTION	REPLO is an application based on FIWARE that allows controlling the attendance in events.
LINK	https://marketplace.fiware.org/pages/solutions/c9c25a72e2ea4dac5643cce8

NAME	SENSIoT
DESCRIPTION	SENSIoT is a IoT software based on FIWARE that is intended for gathering data from SES
LINK	https://marketplace.fiware.org/pages/solutions/666207c189d5917064754e8f

NAME	siGEUS
DESCRIPTION	siGEUS is a solution based on FIWARE that is intended to monitor traceability, weight and location of the waste.
LINK	https://marketplace.fiware.org/pages/solutions/e86ee0ac0f75b7e6d86fadde

NAME	Situm Indoor Positioning
DESCRIPTION	Situm Indoor Positioning is a FIWARE positioning/navigation tool designed for smartphones
LINK	https://marketplace.fiware.org/pages/solutions/3b90cc37b408cb4cdb22e055

NAME	Traxion
DESCRIPTION	FIWARE Traxion is an automatic capacity check software designed for cameras.
LINK	https://marketplace.fiware.org/pages/solutions/009aceade7ed67c669365f31

NAME	Xapix
DESCRIPTION	FIWARE Xapix is a software intended to develop smart city solutions.
LINK	https://marketplace.fiware.org/pages/solutions/470c610dc1ae16ab64770bd2

15 METHODOLOGIES

This section describes many of the Methodologies available in the market that are suitable to be used by any LSP (Large Scale Pilot). Although not being software, these methodologies can be useful for any starting pilot as a reference.

NAME	Agile
DESCRIPTION	The Agile methodology for software development divides the work between teams and encourages collaboration between them.
LINK	https://en.wikipedia.org/wiki/Agile_software_development

NAME	Continuous integration
DESCRIPTION	Continuous integration is a development technique for software that merges all code in a repository.
LINK	https://en.wikipedia.org/wiki/Continuous_integration

NAME	RAD
DESCRIPTION	RAD is a development technique used for creating software that is focused in interfaces with little planning.
LINK	https://en.wikipedia.org/wiki/Rapid_application_development

NAME	Scrum
DESCRIPTION	Scrum is a software development methodology which is focused in performing several team meetings.
LINK	https://en.wikipedia.org/wiki/Scrum_(software_development)

NAME	TDD
DESCRIPTION	TDD is a development technique for software that focuses on repeating small development cycles.
LINK	https://en.wikipedia.org/wiki/Test-driven_development

NAME	Waterfall
DESCRIPTION	The Waterfall is a software development technique that divides the development in independent phases.
LINK	https://en.wikipedia.org/wiki/Waterfall_model

16 PARADIGMS

This section describes many of the Paradigms available in the market that are suitable to be used by any LSP (Large Scale Pilot). Although not being software, these paradigms can be useful for any starting pilot as a reference.

NAME	Declarative programming
DESCRIPTION	The Declarative programming is a computer paradigm that does not describe a unique control flow in apps.
LINK	https://en.wikipedia.org/wiki/Declarative_programming

NAME	Imperative programming
DESCRIPTION	The Imperative programming is a computer science paradigm that focuses on apps that are managed by specific commands.
LINK	https://en.wikipedia.org/wiki/Imperative_programming

NAME	Metaprogramming
DESCRIPTION	Metaprogramming is a computer science paradigm where applications are capable of using other apps and its data.
LINK	https://en.wikipedia.org/wiki/Metaprogramming

NAME	MSA
DESCRIPTION	MSA is a software architecture that is based on several services aligned in order to create an app.
LINK	https://en.wikipedia.org/wiki/Microservices

NAME	MVC
DESCRIPTION	MVC is a software architecture that divides a program in Model/View/Controller in order to separate the front-end from the back-end.
LINK	https://en.wikipedia.org/wiki/Model%E2%80%93view%E2%80%93controller

NAME	Non Structured programming
DESCRIPTION	Non Structured programming is a computer science paradigm that uses GO-TO commands.
LINK	https://en.wikipedia.org/wiki/Non-structured_programming

NAME	Publish-subscribe architecture
DESCRIPTION	Publish-subscribe is a software architecture that creates and sends messages to users without requests
LINK	https://en.wikipedia.org/wiki/Publish%E2%80%93subscribe_pattern

NAME	SOA
DESCRIPTION	SOA is a software architecture that provides services.
LINK	https://en.wikipedia.org/wiki/Service-oriented_architecture

NAME	Structured programming
DESCRIPTION	The Structured programming is a computer science paradigm focused at improving the code quality.
LINK	https://en.wikipedia.org/wiki/Structured_programming

17 PLATFORMS

This section describes many of the main Platforms available in the market that are suitable to be used by any LSP (Large Scale Pilot).

NAME	CCOC
DESCRIPTION	CCOC is a platform based on FIWARE designed to manage suppliers' services
LINK	https://marketplace.fiware.org/pages/solutions/bc3be30528b157f998e5d87f

NAME	FIWOO
DESCRIPTION	FIWARE FIWOO is a data platform for urban IoE apps and services.
LINK	https://marketplace.fiware.org/pages/solutions/dd093c0591de5859866dd62c

NAME	Flink Node
DESCRIPTION	FIWARE Flink Node is a platform with all generic enablers
LINK	https://marketplace.fiware.org/pages/solutions/92e80d4f18e1c3e98e91aadf

NAME	Helix
DESCRIPTION	Helix is a microservice platform based on FIWARE
LINK	https://marketplace.fiware.org/pages/solutions/fee10a6a7755e554686664fd

NAME	Orchestra Cities
DESCRIPTION	FIWARE Orchestra Cities is an IoT software that is intended for creating Smart cities.
LINK	https://marketplace.fiware.org/pages/solutions/c8a29a1f62a688fa58d8bc8d

NAME	Sirus
DESCRIPTION	FIWARE Sirus is a platform based on Open Source that is designed to run in the Cloud.
LINK	https://marketplace.fiware.org/pages/solutions/c9e72846b5e38de6a87bfcc9

NAME	SmartOrchestra
DESCRIPTION	FIWARE SmartOrchestra is a Platform designed to securely orchestrating apps.
LINK	https://marketplace.fiware.org/pages/solutions/cfad9d3a4c855c0dfc5217c2

NAME	Telenet Tinx
DESCRIPTION	Telenet Tinx is a FIWARE device and data management platform for smart cities.
LINK	https://marketplace.fiware.org/pages/solutions/444cb097eb2148134651c0f8

NAME	Urban Data Platform
DESCRIPTION	Urban Data Platform is a solution based on FIWARE created by Atos and intended for gathering and processing data from sensors.
LINK	https://marketplace.fiware.org/pages/solutions/eeba4dad358befeaa3dbcff6

NAME	UrbanPulse
DESCRIPTION	UrbanPulse is an information platform for urban data based on FIWARE
LINK	https://marketplace.fiware.org/pages/solutions/b1daf7e5fa6b90683d396736

NAME	We4City
DESCRIPTION	FIWARE We4City is an IoT platform intended for gathering data coming from sensors in smart cities.
LINK	https://marketplace.fiware.org/pages/solutions/a351bee753897d144351bc5a

NAME	Yggio
DESCRIPTION	FIWARE Yggio is an IoT operating system intended for managing smart cities.
LINK	https://marketplace.fiware.org/pages/solutions/cfe25e8bc8220d0993a1aaf3

18 SOLUTIONS

This section describes many of the main Solutions available in the market that are suitable to be used by any LSP (Large Scale Pilot).

NAME	Agricolus
DESCRIPTION	Agricolus is a FIWARE app intended for precision farming.
LINK	https://marketplace.fiware.org/pages/solutions/2ec3c741ef4dd8f83bab4e83

NAME	Artudata
DESCRIPTION	FIWARE ArtuData is an A.I. software designed to help users to find clients.
LINK	https://marketplace.fiware.org/pages/solutions/06c346aedee5e14b06c41ccf

NAME	Beeta
DESCRIPTION	FIWARE Beeta is a software designed to help people to save money in their energy bills.
LINK	https://marketplace.fiware.org/pages/solutions/619aca61c8662981e03a561a

NAME	Bettair
DESCRIPTION	FIWARE Bettair is a mapping tool designed to measure pollution in cities
LINK	https://marketplace.fiware.org/pages/solutions/d75bc7d8db8a2cdf8cc12084

NAME	Bookingabus.com
DESCRIPTION	FIWARE Bookingabus.com is a software intended to manage bus pricing.
LINK	https://marketplace.fiware.org/pages/solutions/699a35a5411fe12e4cc27701

NAME	Breeze
DESCRIPTION	FIWARE Breeze is a software intended to gather data coming from sensors to create better environments.
LINK	https://marketplace.fiware.org/pages/solutions/4cee5102717a2b0d36681b7e

NAME	Bustimize
DESCRIPTION	FIWARE Bustimize is a platform intended to reduce the passengers waiting time.
LINK	https://marketplace.fiware.org/pages/solutions/e1f9208b1b215ac9954f3178

NAME	CardioWheel
DESCRIPTION	FIWARE CardioWheel is an ADAS intended to prevent drowsiness in drivers.
LINK	https://marketplace.fiware.org/pages/solutions/da548f1997ebeb5d2f664328

NAME	Ciclogreen
DESCRIPTION	FIWARE Ciclogreen is an online platform that rewards sustainable mobility in smart cities.
LINK	https://marketplace.fiware.org/pages/solutions/b6b4b03f1d65ce7c8983f43b

NAME	CityGO
DESCRIPTION	FIWARE CityGO is a mobility app designed to give users recommendations to improve their paths.
LINK	https://marketplace.fiware.org/pages/solutions/6ccbccac9c87ab76c5f8ff61

NAME	CitySense
DESCRIPTION	FIWARE CitySense is a project created in Malaga with the aims to interconnect users with the city.
LINK	https://marketplace.fiware.org/pages/solutions/5d166a43a16d274f0305de1d

NAME	Cloud City Operations Center
DESCRIPTION	Cloud City Operations Center is a FIWARE application intended for managing smart cities.
LINK	https://marketplace.fiware.org/pages/solutions/310ad83a0540d4d2fa77596a

NAME	DelSuper.es
DESCRIPTION	FIWARE DelSuper.es is a software intended to perform grocery shopping.
LINK	https://marketplace.fiware.org/pages/solutions/10b3c42968b005e70383401f

NAME	Digitanimal
DESCRIPTION	FIWARE Digitanimal is a solution designed to increase profit of farms, animal welfare and traceability.
LINK	https://marketplace.fiware.org/pages/solutions/cfffde4b5aaf151b325da8c3

NAME	Drone2.Me
DESCRIPTION	FIWARE Drone delivery is a service intended to perform drone transportation of goods to consumers.
LINK	https://marketplace.fiware.org/pages/solutions/88cd0f20155dfb79981a9e1f

NAME	e-bot7
DESCRIPTION	FIWARE e-bot7 integrates A.I. in the customer service.
LINK	https://marketplace.fiware.org/pages/solutions/d9cb655536053d4d6f0462b1

NAME	EcoSAT
DESCRIPTION	FIWARE EcoSAT is a solution for the monitoring of waste collection and road cleaning services
LINK	https://marketplace.fiware.org/pages/solutions/2c5abf8cf48258c0cd03b0d8

NAME	Elliot Cloud
DESCRIPTION	FIWARE Elliot Cloud is an Internet of Everything platform designed to monitor sources of data.
LINK	https://marketplace.fiware.org/pages/solutions/4a79e8b0c28795af14cc5475

NAME	Everimpact
DESCRIPTION	FIWARE Everimpact is a sotware intended for monitoring Carbon Emissions in smart cities.
LINK	https://marketplace.fiware.org/pages/solutions/de9dfc84c4fc2db2b5b0df19

NAME	eVineyard
DESCRIPTION	Vineyard is a FIWARE management software designed to help users with bureaucracy.
LINK	https://marketplace.fiware.org/pages/solutions/8448609e669175cbe00eaa2e

NAME	Farm Dog
DESCRIPTION	FIWARE Farm Dog is a tool intended for keeping agricultural fields free from pests.
LINK	https://marketplace.fiware.org/pages/solutions/170e9893cebe97135d474b42

NAME	FASHION CLOUD
DESCRIPTION	FIWARE FASHION CLOUD is a platform designed to allow the interchange of content in fashion industry
LINK	https://marketplace.fiware.org/pages/solutions/c54993aa921db6c182cdacc2

NAME	FLIWARE
DESCRIPTION	FIWARE FLIWARE is a mobile app designed to help passengers in the airport.
LINK	https://marketplace.fiware.org/pages/solutions/cf625a793addfd4fc4199b90

NAME	FLOUD
DESCRIPTION	FIWARE FLOUD is a platform designed to collect data from vehicles.
LINK	https://marketplace.fiware.org/pages/solutions/306211d4fa85454ef12254a2

NAME	FOOODER
DESCRIPTION	FIWARE Foooder is a software intended to help users to select food in shops.
LINK	https://marketplace.fiware.org/pages/solutions/cdbf01b17e05aa9b4b397370

NAME	FreshIndex
DESCRIPTION	FIWARE Fresh Index is a real time shelf life indicator for food.
LINK	https://marketplace.fiware.org/pages/solutions/d8b01cb491d2fa11ac1fc955

NAME	FruitsApp
DESCRIPTION	FIWARE FruitsApp is a marketplace designed for fruit companies.
LINK	https://marketplace.fiware.org/pages/solutions/3b89435e8de6f91d732b8217

NAME	Fueloyal
DESCRIPTION	FIWARE Fueloyal is a solution designed to manage fleet tracking and fuel management.
LINK	https://marketplace.fiware.org/pages/solutions/1cad11ed4a4cfc0145d35315

NAME	greenApes
DESCRIPTION	FIWARE greenApes is a digital platform intended to increase sustainability for citizens in smart cities.
LINK	https://marketplace.fiware.org/pages/solutions/81d411b25138d04f3fb67763

NAME	GymCraft
DESCRIPTION	FIWARE GymCraft is a software designed to connect users with fitness devices and virtual environments.
LINK	https://marketplace.fiware.org/pages/solutions/34935a42f379aacdde30d6bb

NAME	Hostabee
DESCRIPTION	FIWARE Hostabee is a software designed to keep track bees' colonies.
LINK	https://marketplace.fiware.org/pages/solutions/4dca56137f0998f888d2d172

NAME	IDA
DESCRIPTION	FIWARE IDA is a web platform designed to control climate and its risks.
LINK	https://marketplace.fiware.org/pages/solutions/046391801525ebf1cb80ec1a

NAME	IMAS+
DESCRIPTION	FIWARE IMAS+ is a platform designed for Infrastructure maintenance.
LINK	https://marketplace.fiware.org/pages/solutions/cdcee19416245452203d1062

NAME	INSYLO
DESCRIPTION	FIWARE INSYLO is a solution intended to monitor silos in farms to lower costs.
LINK	https://marketplace.fiware.org/pages/solutions/3074edd75d2df456482dfe72

NAME	Linea Ciudadana
DESCRIPTION	FIWARE Linea Ciudadana is a platform designed to help in citizens communication.
LINK	https://marketplace.fiware.org/pages/solutions/9eae8fbd2402886a64f169f8

NAME	MASAI
DESCRIPTION	FIWARE MASAI is a software intended to manage data coming from IoT devices in manufacturing systems.
LINK	https://marketplace.fiware.org/pages/solutions/5a6bac60ffca24dd063170ca

NAME	Maturix
DESCRIPTION	FIWARE Maturix is a tool intended to check concrete curing.
LINK	https://marketplace.fiware.org/pages/solutions/be495e532b436f83d79eb808

NAME	Mermix
DESCRIPTION	FIWARE Mermix is a farm management system designed to help farmers to find services/tools.
LINK	https://marketplace.fiware.org/pages/solutions/3bacbe5a1a8e374ccd3256ee

NAME	MUV
DESCRIPTION	FIWARE MUV is a SMM system designed to enable mobility.
LINK	https://marketplace.fiware.org/pages/solutions/a386af961169aee70316e276

NAME	nixi1
DESCRIPTION	FIWARE nixi1 is a tool intended to text/send voice notes to book flights and hotels.
LINK	https://marketplace.fiware.org/pages/solutions/0a1a5da96f9e6ffb7cf6a244

NAME	OpenMove
DESCRIPTION	OpenMove is a FIWARE software intended for transport ticketing.
LINK	https://marketplace.fiware.org/pages/solutions/4042fd6a4c4dc0afba151226

NAME	OurPath
DESCRIPTION	FIWARE OurPath is an online software to help users becoming healthier.
LINK	https://marketplace.fiware.org/pages/solutions/00b408d7d5e3e8f15b5031bf

NAME	Outbarriers
DESCRIPTION	FIWARE Outbarriers is a beacon solution.
LINK	https://marketplace.fiware.org/pages/solutions/8ffba0c562fc2cdcb3d3fbea

NAME	Qirate
DESCRIPTION	FIWARE Qirate is a software designed to measure the quality of life in a location.
LINK	https://marketplace.fiware.org/pages/solutions/3872869382e638bb47e6700b

NAME	QUHOMA
DESCRIPTION	QUalitative HOrticulture MArketplace is a FIWARE online market for sharing Agri-food data.
LINK	https://marketplace.fiware.org/pages/solutions/6c7ea7af132d35128d43891d

NAME	RAY
DESCRIPTION	RAY is a FIWARE cloud service designed to improve accessibility in smartphones for blind people.
LINK	https://marketplace.fiware.org/pages/solutions/61516158faa4060d122f14ca

NAME	RezGuru
DESCRIPTION	FIWARE RezGuru is a dynamic pricing tool.
LINK	https://marketplace.fiware.org/pages/solutions/426caaa587b5f5cbb46a3a40

NAME	Rosy
DESCRIPTION	FIWARE Rosy is a traffic planner software designed to dynamize traffic in cities.
LINK	https://marketplace.fiware.org/pages/solutions/8a9733d64dc9ee59b9aa8acf

NAME	SaMMY
DESCRIPTION	FIWARE SaMMY is a platform designed for yacht industry.
LINK	https://marketplace.fiware.org/pages/solutions/00d3fb3501261fdb5ab32dff

NAME	Save-a-Space
DESCRIPTION	FIWARE Save-a-Space is parking software designed to reserve and pay for a parking.
LINK	https://marketplace.fiware.org/pages/solutions/c1b22bc229cb0e2bab4435f2

NAME	Scuter
DESCRIPTION	Scuter from FIWARE is a smart 3 wheels scooter designed to improve urban mobility.
LINK	https://marketplace.fiware.org/pages/solutions/5e5c1985461f0fad2a2e43c8

NAME	Sensei
DESCRIPTION	FIWARE Sensei is an AI software intended for products recognition in video streamings.
LINK	https://marketplace.fiware.org/pages/solutions/a54eba6b3317120cb6c2d9e7

NAME	SmartAppCity
DESCRIPTION	FIWARE SmartAppCity is an APP designed to put together all data coming from smart city services.
LINK	https://marketplace.fiware.org/pages/solutions/012f0678486c9bc99d6e2913

NAME	Smartlamppost
DESCRIPTION	FIWARE Smartlamppost is smart lamppost for smart cities that can be connected by software using 5G.
LINK	https://marketplace.fiware.org/pages/solutions/ee86ef5b0bdbbfe59babb01c

NAME	Snap4City
DESCRIPTION	FIWARE Snap4City is a software builder for smart cities.
LINK	https://marketplace.fiware.org/pages/solutions/b8905e91973b420189cce972

NAME	SPERO
DESCRIPTION	Spero is a FIWARE DSS report tool intended for smart cities.
LINK	https://marketplace.fiware.org/pages/solutions/f4190146f027ff2d15a03334

NAME	Stop-buy
DESCRIPTION	FIWARE Stop-buy is a smart parking software for smart cities.
LINK	https://marketplace.fiware.org/pages/solutions/34ce499bc9bcffbb4b0102dc

NAME	Stratio Automotive
DESCRIPTION	FIWARE Stratio Automotive is a software intended to manage data coming from smart vehicles.
LINK	https://marketplace.fiware.org/pages/solutions/96afb6f8ccaef2f85aec6d77

NAME	TalkyCar
DESCRIPTION	FIWARE TalkyCar is a software designed to connect a car with a smartphone.
LINK	https://marketplace.fiware.org/pages/solutions/f8190f6a6d5bcf4e90636c68

NAME	Thor
DESCRIPTION	FIWARE Thor is a cloud workflow.
LINK	https://marketplace.fiware.org/pages/solutions/9028ac500c98f40e11723878

NAME	Trace Labs
DESCRIPTION	FIWARE Trace Labs is a protocol designed for data exchange.
LINK	https://marketplace.fiware.org/pages/solutions/2691a34514feaddd49b93724

NAME	Urbo
DESCRIPTION	FIWARE Urbo is a Dashboard designed to manage smart city services.
LINK	https://marketplace.fiware.org/pages/solutions/449113d3a2ce64f5ede27160

NAME	Viur
DESCRIPTION	FIWARE Viur is a software intended to visualize data.
LINK	https://marketplace.fiware.org/pages/solutions/e72ef17817f3a6a48f5ebf60

NAME	Waste4Think
DESCRIPTION	FIWARE Waste4Think is a software designed to manage waste systems.
LINK	https://marketplace.fiware.org/pages/solutions/00326bfbd7ff982e47d0d857

NAME	Watcher
DESCRIPTION	FIWARE Watcher is a tool designed to help families managing its finances.
LINK	https://marketplace.fiware.org/pages/solutions/32122a93aa41f43998794035

NAME	WiseTown
DESCRIPTION	WiseTown is a FIWARE application for IoT in smart cities designed to improve the life of citizens.
LINK	https://marketplace.fiware.org/pages/solutions/669bf8523d9a4f4c8caff9a5

NAME	YBVR
DESCRIPTION	FIWARE YerbaBuena is a live streaming software for VR.
LINK	https://marketplace.fiware.org/pages/solutions/2a6a0338b1efbf6c6bf0c230

19 STANDARDS

This section describes many of the main Standards available in the market that are suitable to be used by any LSP (Large Scale Pilot).

NAME	Chemistry
DESCRIPTION	Chemistry is an O.S. version of CMIS created by Apache and intended for sharing data between CMS'.
LINK	http://chemistry.apache.org/

NAME	ETSI GR CIM 002 V1.1.1
DESCRIPTION	ETSI standard about C.I.M. applied to Smart cities.
LINK	https://www.etsi.org/deliver/etsi_gr/CIM/001_099/002/01.01.01_60/gr_cim002v010101p.pdf

NAME	ETSI TR 118 522 V2.0.0
DESCRIPTION	ETSI standard about HGI-oneM2M integration.
LINK	https://www.etsi.org/deliver/etsi_tr/118500_118599/118522/02.00.00_60/tr_118522v020000p.pdf

NAME	ETSI TR 118 524 V2.0.0
DESCRIPTION	ETSI standard about oneM2M-3GPP architectures relationship.
LINK	https://www.etsi.org/deliver/etsi_tr/118500_118599/118524/02.00.00_60/tr_118524v020000p.pdf

NAME	Santuario
DESCRIPTION	Santuario is an implementation of the security standards for the XML format created by the Apache Foundation.
LINK	http://santuario.apache.org/

20 PROGRAMMING

This section describes many of the main Programming tools available in the market that are suitable to be used by any LSP (Large Scale Pilot).

NAME	Abseil
DESCRIPTION	Abseil is an Open Source project created by Google with the objective of increasing the C++ library.
LINK	https://abseil.io/

NAME	AdaNet
DESCRIPTION	AdaNet is a framework based in TensorFlow created by Google under Apache 2.0 license that is intended for learning models.
LINK	https://github.com/tensorflow/adanet

NAME	Airavata
DESCRIPTION	Airavata is a framework created by Apache monitor apps/workflows on clouds/grids. It is available under Apache license 2.0.
LINK	http://airavata.apache.org/

NAME	Airflow
DESCRIPTION	Airflow is an O.S. tool designed by Apache with the objective of monitoring/scheduling workflows.
LINK	http://airflow.apache.org/

NAME	Ambari
DESCRIPTION	Ambari is a tool created by Apache in order to manage Hadoop clusters. It is available under Apache license 2.0
LINK	http://ambari.apache.org/

NAME	Angular
DESCRIPTION	Angular is a framework created by Google under MIT license that is designed to develop web apps. It was firstly released in 2016. .
LINK	https://angular.io/

NAME	Ant
DESCRIPTION	Ant is a Java tool created by Apache intended to perform building tasks in order to generate an app. It is available under Apache license 2.0.
LINK	http://ant.apache.org/

NAME	Any23
DESCRIPTION	Any23 is a tool created by Apache under Apache license 2.0 with the aim of extracting structured data from RDF web documents.
LINK	http://any23.apache.org/

NAME	Aries
DESCRIPTION	Aries is a set of Java components created by Apache under Apache license 2.0 and intended to create an OSGi model.
LINK	http://aries.apache.org/

NAME	Arrow
DESCRIPTION	Arrow is a development platform created by Apache under Apache license 2.0 with the aim of extracting analytic data from memory.
LINK	http://arrow.apache.org/

NAME	Atlas
DESCRIPTION	Atlas is a set of services created by Apache under Apache license 2.0 that allows defining governance services for Hadoop and integration with data.
LINK	http://atlas.apache.org/#/

NAME	Attic
DESCRIPTION	Attic is a tool created by Apache under A.L 2.0 to provide processes/solutions to determine whether a project has finished.
LINK	http://attic.apache.org/

NAME	Avro!
DESCRIPTION	Avro! is a system for data serialization created by Apache under A.L 2.0 that provides data structures, compact format and RPC.
LINK	http://avro.apache.org/

NAME	Axis
DESCRIPTION	Axis is a Java web service container created by Apache under Apache 2.0 license in order to deploy/run webservices.
LINK	http://axis.apache.org/

NAME	Bahir
DESCRIPTION	Bahir is a set of extensions for Spark/Flink created by Apache under A.L 2.0 in order to extend the reach of Spark/Flink.
LINK	http://bahir.apache.org/

NAME	Bazel
DESCRIPTION	Bazel is an Open Source build tool for client/server software created and maintained by Google.
LINK	https://bazel.build/

NAME	Biz Framework
DESCRIPTION	FIWARE Biz Framework is an Enabler intended to support context monetization.
LINK	https://business-api-ecosystem.rtfd.io/

NAME	Blockly
DESCRIPTION	Blockly is a library developed by Google intended for adding drag and drop functions to iOS/Web/Android apps.
LINK	https://developers.google.com/blockly

NAME	BoringSSL
DESCRIPTION	BoringSSL is an Open Source openSSL fork created by Google in order to implement cryptography and TLS.
LINK	https://boringssl.googlesource.com/boringssl/

NAME	Brooklyn
DESCRIPTION	Brooklyn is a software created by Apache intended for creating/managing cloud apps. It is licensed under Apache license 2.0
LINK	http://brooklyn.apache.org/

NAME	Buildr
DESCRIPTION	Buildr is a Java build system created by Apache under A.L 2.0 that includes support for Groovy and other tools.
LINK	http://buildr.apache.org/

NAME	Kubric
DESCRIPTION	Kubric is an O.S. framework designed by Google with the aim of creating realistic scenes with PyBullet tool.
LINK	https://pybullet.org/wordpress/

NAME	BVal
DESCRIPTION	BVal is an Open Source version of the Java Bean specification that is licensed under A.L 2.0
LINK	http://bval.apache.org/

NAME	Camel
DESCRIPTION	Camel is an Open Source framework created by Apache intended for integrating systems consuming/producing data using EIP.
LINK	https://camel.apache.org/

NAME	Cartographer
DESCRIPTION	Cartographer is a mapping utility created by Google under Apache license 2.0 that is intended to provide localization/mapping in real time.
LINK	https://github.com/cartographer-project/

NAME	Cauliflower Vest
DESCRIPTION	Cauliflower Vest is a tool developed by Google under A.L 2.0 that is intended for optimizing technologies for disk encryption.
LINK	https://github.com/google/cauliflowervest

NAME	Celix
DESCRIPTION	Celix is a C framework that implements the OSGi specification. It was created by Apache under Apache license 2.0 and is intended for developing software.
LINK	http://celix.apache.org/

NAME	Chemistry
DESCRIPTION	Chemistry is an O.S. version of CMIS created/licensed by Apache and intended to enable information sharing between CMS'.
LINK	http://chemistry.apache.org/

NAME	CKAN extensions
DESCRIPTION	FIWARE CKAN extensions is an Enabler available under AGPL 3.0 license and intended to allow dataset publication, manage access and assign prices to the CKAN.
LINK	https://fiware-ckan-extensions.rtfd.io/

NAME	CloudStack
DESCRIPTION	CloudStack is an Open Source software created by Apache intended for deploying/managing networks of virtual machines.
LINK	http://cloudstack.apache.org/

NAME	Cocoon
DESCRIPTION	Cocoon is a Spring framework created by Apache under Apache license and intended for app development with components.
LINK	http://cocoon.apache.org/

NAME	Cordova
DESCRIPTION	Cordova is an Open Source framework created by Apache intended for developing mobile apps based in HTML/Javascript.
LINK	https://cordova.apache.org/

NAME	Creadur
DESCRIPTION	Creadur is a Java tool created by Apache under Apache license 2.0 with the aim of auditing license headers.
LINK	http://creadur.apache.org/

NAME	cTAKES
DESCRIPTION	cTAKES is a processing system for natural language created by Apache under Apache license 2.0 with the objective of extracting information from medical files.
LINK	http://ctakes.apache.org/

NAME	Curator
DESCRIPTION	Curator is a Java library which includes a framework. It was created by Apache with the objective of using Zookeeper.
LINK	http://curator.apache.org/

NAME	CXF
DESCRIPTION	CXF is an O.S. framework created by Apache that is intended for developing services (REST/SOAP) with frontend APIs like JAX-RS/JAX-WS.
LINK	http://cxf.apache.org/

NAME	Dart
DESCRIPTION	Dart is a ECMA programming language created by Google under BSD license and intended for desktop/mobile app development .
LINK	https://dart.dev/

NAME	DataFu
DESCRIPTION	DataFu is a set of libraries created by Apache under A.L 2.0 with the objective of managing data in Hadoop.
LINK	http://datafu.apache.org/

NAME	DeepMind Lab
DESCRIPTION	DeepMind Lab is a 3D game platform developed by Google under GNU license 2.0 that is intended for A.I. and machine learning
LINK	https://github.com/deepmind/lab

NAME	DeltaSpike
DESCRIPTION	DeltaSpike is a set of CDI extensions created by Apache under A.L 2.0 and intended for providing new JAVA features.
LINK	http://deltaspike.apache.org/

NAME	Directory
DESCRIPTION	Directory is an Open Source Java project created by the Apache Foundation with the aim of providing directory solutions/tools for LDAP.
LINK	http://directory.apache.org/

NAME	Domibus
DESCRIPTION	FIWARE Domibus is an Enabler designed with the aim of helping users to share data. It is available under public license.
LINK	https://ec.europa.eu/cefdigital/wiki/display/CEFDIGITAL/Domibus

NAME	Dopamine
DESCRIPTION	Dopamine is a framework based on TensorFlow that was created by Google under Apache license 2.0 with the aim of reinforcing learn algorithms.
LINK	https://github.com/google/dopamine

NAME	Draco
DESCRIPTION	Draco is a library designed by Google under Apache license 2.0 that is intended for decompressing/compressing 3D graphics and improving its storage/transmission.
LINK	https://github.com/google/draco

NAME	Dubbo
DESCRIPTION	Dubbo is an RPC O.S. framework based on Java created by Apache with the aim of providing RPC interfaces, balancing and service registration.
LINK	http://dubbo.apache.org/

NAME	Eclipse
DESCRIPTION	Eclipse is an O.S. IDE (Integrated Development Environment) that was created by the Eclipse foundation under Apache license in 2001.
LINK	https://www.eclipse.org

NAME	Fast DDS
DESCRIPTION	FIWARE Fast DDS is an Enabler available under Apache license 2.0 that is intended for performing interfacing tasks with ROS2.
LINK	https://github.com/eProsima/Fast-RTPS

NAME	Fastlane
DESCRIPTION	Fastlane is an open source tool created by Google intended for building automation of mobile APPS.
LINK	https://fastlane.tools/

NAME	Felix
DESCRIPTION	Felix is an OSGi framework and service platform implementation created by the Apache Foundation under Apache license.
LINK	http://felix.apache.org/

NAME	FIROS
DESCRIPTION	FIWARE FIROS is an Enabler available under MiT license and intended for performing interfacing tasks between robots and cloud.
LINK	https://github.com/iml130/firos

NAME	FlatBuffers
DESCRIPTION	FlatBuffers is an open source serialization library for several languages created by Google and intended for improving apps optimization.
LINK	http://google.github.io/flatbuffers

NAME	Flex
DESCRIPTION	Flex is an Open Source framework created by Apache under A.L 2.0 with the aim of creating mobile/web apps.
LINK	http://flex.apache.org/

NAME	Flutter
DESCRIPTION	Flutter is an SDK developed by Google that is intended for developing mobile APPS. It is licensed under Creative commons 4.0
LINK	https://flutter.dev/

NAME	FontDiff
DESCRIPTION	FontDiff is a tool created by Google under Apache license 2.0 that is intended to compare differences between fonts.
LINK	https://github.com/googlei18n/fontdiff

NAME	FontView
DESCRIPTION	FontView is a tool developed by Google under A.L 2.0 that is intended for displaying all the content inside a font file.
LINK	https://github.com/googlei18n/fontview

NAME	FreeMarker
DESCRIPTION	FreeMarker is a Java library created by Apache under Apache license 2.0 and intended for generating text outputs based on TFL files.
LINK	https://freemarker.apache.org/

NAME	GenomeWarp
DESCRIPTION	GenomeWarp is an O.S. tool designed by Google under A.L 2.0 with the aim of translating genetic variants in genomes.
LINK	https://github.com/verilylifesciences/genomewarp

NAME	Geronimo
DESCRIPTION	Geronimo is a set of O.S Java/Jakarta libraries created by Apache and intended for providing OSGi metadata.
LINK	http://geronimo.apache.org/

NAME	Go
DESCRIPTION	Go is an O.S. programming language used by Google that is focused on productivity.
LINK	https://golang.org/

NAME	Groovy
DESCRIPTION	Groovy is a programming language developed by the Apache Foundation available under Apache 2.0 license that is similar to Python.
LINK	http://groovy.apache.org/

NAME	gRPC
DESCRIPTION	gRPC is a framework created by Google under A.L 2.0 that is intended for connecting services in data centers and performing maintenance/security tasks.
LINK	https://grpc.io/

NAME	Helix
DESCRIPTION	Helix is a framework created by Apache under Apache license 2.0 and intended for managing resources on clusters of nodes.
LINK	http://helix.apache.org/

NAME	HttpComponents
DESCRIPTION	HttpComponents is a set of tools for Java focused on HTTP created by the Apache Foundation.
LINK	http://hc.apache.org/

NAME	Ignite
DESCRIPTION	Ignite is a memory computing platform created by Apache under Apache license 2.0 and intended for building apps with big data processing.
LINK	https://ignite.apache.org/

NAME	Intra
DESCRIPTION	Intra is an O.S application created by Google that is intended for securing the internet access to avoid DNS manipulation.
LINK	https://intra.app/

NAME	Ion
DESCRIPTION	Ion is a platform that was created by Google under A.L 2.0 with the aim building graphical client APPs.
LINK	https://github.com/google/ion

NAME	Isis
DESCRIPTION	Isis is an Open Source tool created by Apache intended for providing automatically generated UI's to apps.
LINK	http://isis.apache.org/

NAME	Istio
DESCRIPTION	Istio is an Open Source platform created by Google to connect and secure micro services.
LINK	https://istio.io/

NAME	Java
DESCRIPTION	Java is a programming language appertaining to Oracle that is available under GNU GPL license.
LINK	https://www.java.com

NAME	Javascript
DESCRIPTION	Javascript is a programming language appertaining to the Mozilla fundation. It was firstly developed in 1995.
LINK	https://developer.mozilla.org/es/docs/Web/JavaScript

NAME	jclouds
DESCRIPTION	jclouds is a set of O.S. Java tools created by Apache and intended for creating applications that are portable betweeen clouds.
LINK	http://jclouds.apache.org/

NAME	Jena
DESCRIPTION	Jena is an Open Source framework created by the Apache Foundation and intended for building linked data apps/semantic webs.
LINK	https://jena.apache.org/

NAME	Johnzon
DESCRIPTION	Johnzon is a set of extensions for JsonProcessing created by the Apache Foundation.
LINK	http://johnzon.apache.org/

NAME	Joshua
DESCRIPTION	Joshua is a Java O.S decoder created by the Apache Foundation with the objective of performing machine translation.
LINK	http://joshua.apache.org/

NAME	JUDDI
DESCRIPTION	JUDDI is a Java O.S. implementation of OASIS created by Apache that includes JSR 93 (SCOUT).
LINK	http://juddi.apache.org/

NAME	Juneau
DESCRIPTION	Juneau is a Java set of tools created by Apache under Apache license 2.0 and intended for supporting POJOs/RDF and providing a REST API.
LINK	http://juneau.apache.org/#about.html

NAME	Karaf
DESCRIPTION	Karaf is an O.S runtime created by the Apache Foundation and intended for running on the cloud.
LINK	http://karaf.apache.org/

NAME	Knative
DESCRIPTION	Knative is an O.S platform based on Kubernetes developed by Google that is intended for administering workloads.
LINK	https://knative.dev/

NAME	Knox
DESCRIPTION	Knox is an Application Gateway created by the Apache Foundation under Apache license 2.0 that is intended to interact with Hadoop.
LINK	http://knox.apache.org/

NAME	Kritis
DESCRIPTION	Kritis is an O.S. application developed by Google under A.L 2.0 with the aim of securing Kubernetes apps.
LINK	https://github.com/grafeas/kritis

NAME	Kubeflow
DESCRIPTION	Kubeflow is a tool designed by Google under Apache license 2.0 that is intended for performing deployments in Kubernetes.
LINK	https://kubeflow.org/

NAME	Kurento
DESCRIPTION	FIWARE Kurento is an Enabler designed to process streams of data
LINK	https://kurento.rtfd.io/

NAME	Kythe
DESCRIPTION	Kythe is a software created by Google under Apache license 2.0 which main aim is building tools that work with code.
LINK	https://kythe.io/

NAME	Libcloud
DESCRIPTION	Libcloud is a library created by Apache with the aim of allowing users to interact with cloud services through an API.
LINK	http://libcloud.apache.org/

NAME	Logging
DESCRIPTION	Logging is a set of O.S. tools created by Apache and intended for managing the logging behavior of applications.
LINK	http://logging.apache.org/

NAME	Lucene
DESCRIPTION	Lucene is an Open Source search software based on Java that was created by the Apache Foundation.
LINK	https://lucene.apache.org/

NAME	Lucene.NET
DESCRIPTION	Lucene.NET is a .NET version of Lucene created by Apache under Apache license 2.0.
LINK	http://lucenenet.apache.org/

NAME	Magenta
DESCRIPTION	Magenta is a Google O.S project intended for improving the machine learning process of creating artistic representations.
LINK	https://magenta.tensorflow.org/

NAME	Mahout
DESCRIPTION	Mahout is an O.S. algebra framework created by Apache under A.L 2.0 and intended for easing the implementation of algorithms.
LINK	http://mahout.apache.org/

NAME	Maven
DESCRIPTION	Maven is a tool created by Apache under Apache license 2.0 and intended for performing build tasks using a POM file.
LINK	http://maven.apache.org/

NAME	Micro XRCE-DDS
DESCRIPTION	FIWARE Micro XRCE-DDS is an Enabler available under Apache license 2.0 that is a light version of DDS.
LINK	https://github.com/eProsima/Micro-XRCE-DDS

NAME	MINA
DESCRIPTION	MINA is a network framework created by Apache under A.L 2.0 and intended for helping users to develop network applications.
LINK	http://mina.apache.org/

NAME	MyFaces
DESCRIPTION	MyFaces is a library created by Apache under A.L 2.0 that implements additional features/components for JSF.
LINK	http://myfaces.apache.org/#/

NAME	Mynewt
DESCRIPTION	Mynewt is an O.S. framework created by apache that is intended for communicating apps with network stacks such as Bluetooth/Wi-Fi.
LINK	http://mynewt.apache.org/

NAME	Netbeans
DESCRIPTION	Netbeans is a Java IDE created by Apache under CDDL and GPL2 license.
LINK	https://netbeans.org/

NAME	Neuroglancer
DESCRIPTION	Neuroglancer is a visualization framework created by Google under Apache 2.0 license which main objective is displaying volumetric data.
LINK	https://github.com/google/neuroglancer

NAME	NiFi
DESCRIPTION	NiFi is a tool created by Apache under A.L 2.0 with the objective of supporting scalable graphs.
LINK	http://nifi.apache.org/

NAME	Nomulus
DESCRIPTION	Nomulus is a software created by Google under Apache license 2.0 that is in charge of managing the registration of domains on the Google Cloud Platform.
LINK	https://nomulus.foo/

NAME	Nutch
DESCRIPTION	Nutch is a web crawler created by Apache under Apache 2.0 license that uses Hadoop in order to process batches of data.
LINK	http://nutch.apache.org/

NAME	Olingo
DESCRIPTION	Olingo is a Java OData library developed by Apache under Apache license.
LINK	http://olingo.apache.org/

NAME	Oozie
DESCRIPTION	Oozie is a workflow scheduler created by the Apache Foundation under A.L 2.0 that is intended for managing Hadoop jobs.
LINK	http://oozie.apache.org/

NAME	OpenCensus
DESCRIPTION	OpenCensus is an O.S library created by Google with the aim of giving visibility in distributed systems.
LINK	http://opencensus.io/

NAME	OpenJPA
DESCRIPTION	OpenJPA is a Java library created by Apache under A.L 2.0 that can be used as a POJO persistence layer.
LINK	http://openjpa.apache.org/

NAME	OpenMTC
DESCRIPTION	FIWARE OpenMTC is a tool created to develop OneM2M apps.
LINK	https://fiware-openmtc.readthedocs.io/

NAME	OpenNLP
DESCRIPTION	OpenNLP is a M.L. tool created by the Apache Foundation under Apache 2.0 license with the aim of processing natural language text.
LINK	http://opennlp.apache.org/

NAME	OpenThread
DESCRIPTION	OpenThread is an O.S implementation of the Thread IPv6 communication protocol for apps.
LINK	https://openthread.io/

NAME	OpenVidu
DESCRIPTION	FIWARE OpenVidu is a Kurento layer that is intended for media processing.
LINK	https://github.com/OpenVidu/openvidu/

NAME	OpenWeave
DESCRIPTION	OpenWeave is an Open Source implementation of Weave that is intended for securing communications of Nest products. It is available under Apache 2.0 license.
LINK	https://openweave.io/

NAME	OpenWebBeans
DESCRIPTION	OpenWebBeans is an implementation of CDI for Java EE created by Apache under Apache license 2.0.
LINK	http://openwebbeans.apache.org/

NAME	OpenWhisk
DESCRIPTION	OpenWhisk is an O.S. platform created by Apache with the aim of triggering actions in response to events.
LINK	http://openwhisk.apache.org/

NAME	Ozone
DESCRIPTION	Ozone is an O.S object store for Hadoop created by the Apache Foundation that can be used in containerized environments like YARN/Kubernetes.
LINK	http://ozone.apache.org/

NAME	PDFBox
DESCRIPTION	PDFBox is an O.S. library created by Apache with the aim of working with PDF files using Java.
LINK	https://pdfbox.apache.org/

NAME	Perkeep
DESCRIPTION	Perkeep is a set of O.S. formats, protocols and software for sharing/storing/searching data.
LINK	https://perkeep.org/

NAME	Perl
DESCRIPTION	Perl is a server interpreter created and licensed by Apache with the aim of developing dynamic content.
LINK	http://perl.apache.org/

NAME	Phoenix
DESCRIPTION	Phoenix is a tool created by Apache under A.L 2.0 that is designed to allow OLTP and Hadoop analytics.
LINK	http://phoenix.apache.org/

NAME	Pivot
DESCRIPTION	Pivot is an Open Source Java platform created by Apache that is intended for building internet applications.
LINK	http://pivot.apache.org/

NAME	Pixel Visual Core Camera
DESCRIPTION	Pixel Visual Core Camera is a software created by Google under A.L 2.0 with the aim of helping developers enabling Pixel Visual Core in apps.
LINK	https://github.com/google/pixelvisualcorecamera

NAME	POI
DESCRIPTION	POI is a Java tool developed by Apache under Apache license 2.0 and intended for manipulating many file formats based in Open XML Office standards.
LINK	http://poi.apache.org/

NAME	Polymer
DESCRIPTION	Polymer is a library created by Google available under BSD license that is intended for helping users to structure web apps by creating HTML elements.
LINK	https://www.polymer-project.org/

NAME	Portable Runtime
DESCRIPTION	Portable Runtime is a set of libraries created by Apache under Apache license 2.0 in order to provide interfaces to platform-specific implementations.
LINK	http://apr.apache.org/

NAME	Python
DESCRIPTION	Python is a programming language developed in 1991 by the Python Foundation under PSFL license.
LINK	https://www.python.org/

NAME	Quick, Draw! Dataset
DESCRIPTION	Quick, Draw! Dataset is a set of 50000000 pictures intended for helping developers to train neural networks. It is available under CC 4.0
LINK	https://github.com/googlecreativelab/quickdraw-dataset

NAME	RabbitMQ
DESCRIPTION	RabbitMQ is an O.S. SMS brokerage platform that works with several protocols. It was released in 2007 by Pivotal Software under Mozilla Public License and, currently, is property of VMWare.
LINK	https://www.rabbitmq.com/

NAME	React
DESCRIPTION	React is a Javascript framework focused in developing mobile apps. It was firstly released on 2013 by Facebook under MIT license.
LINK	https://reactjs.org/

NAME	REEF
DESCRIPTION	REEF is a library created by Apache under A.L 2.0 that is intended for creating light apps for Hadoop.
LINK	http://reef.apache.org/

NAME	River
DESCRIPTION	River is a version of Jini created by Apache under Apache license 2.0 intended for creating distributed systems.
LINK	http://river.apache.org/

NAME	Roller
DESCRIPTION	Roller is a server based in Java created by the Apache Foundation under Apache license 2.0 that is intended for hosting blogs.
LINK	http://roller.apache.org/

NAME	Royale
DESCRIPTION	Royale is an O.S. frontend app created by the Apache Foundation and intended for allowing user to code in MXML & AS3.
LINK	https://royale.apache.org/

NAME	Samza
DESCRIPTION	Samza is a framework created by Apache under Apache license 2.0 that allows building stateful apps.
LINK	http://samza.apache.org/

NAME	Scorpio Broker
DESCRIPTION	The FIWARE Scorpio Broker is a NGSI-LD Broker intended for federated env. that is available under BSD 3.0 license.
LINK	https://github.com/ScorpioBroker/ScorpioBroker

NAME	Serf
DESCRIPTION	Serf is a C library created by Apache with A.P.R. and intended for being a HTTP client. It is available under A.L 2.0
LINK	http://serf.apache.org/

NAME	ServiceComb
DESCRIPTION	ServiceComb is an O.S. micro service software with support for several languages created by the Apache Foundation.
LINK	http://servicecomb.apache.org/

NAME	ServiceMix
DESCRIPTION	ServiceMix is an O.S. container created by Apache that unifies CXF/Camel/ActiveMQ/Karaf in the same platform.
LINK	http://servicemix.apache.org/

NAME	SINGA
DESCRIPTION	SINGA is a tool created by Apache under Apache license 2.0 focused on training deep learning and models.
LINK	http://singa.apache.org/

NAME	SIS
DESCRIPTION	SIS is an O.S. software created by Apache under Apache license 2.0 and intended for developing geo-spatial apps.
LINK	http://sis.apache.org/

NAME	Skia
DESCRIPTION	Skia is an Open Source graphic library that is used for rasterization with Open GL/Vulkan.
LINK	https://skia.org/

NAME	SkyWalking
DESCRIPTION	SkyWalking is an app created by Apache under Apache license 2.0 with the objective of monitoring a distributed system.
LINK	http://skywalking.apache.org/

NAME	Sling
DESCRIPTION	Sling is an O.S framework created by the Apache Foundation under A.L 2.0 intended for creating REST apps.
LINK	https://sling.apache.org/

NAME	Spring Framework
DESCRIPTION	Spring is an O.S. framework based on C.I. created for Java that was firstly released in 2002 under Apache License 2.0.
LINK	https://spring.io/

NAME	Stellio Context Broker
DESCRIPTION	The FIWARE Stellio Context Broker is an alternative enabler for NGSI-LD Broker available under A.L 2.0
LINK	https://github.com/stellio-hub/stellio-context-broker

NAME	Storm
DESCRIPTION	Storm is an Open Source software created by Apache and intended for processing streams of data.
LINK	http://storm.apache.org/

NAME	Streams
DESCRIPTION	Streams is a set of modules created by Apache under A.L 2.0 that allows integrating online data sources.
LINK	http://streams.apache.org/

NAME	Struts
DESCRIPTION	Struts is an O.S. framework created by the Apache Foundation and intended for creating Java MVC web-apps.
LINK	https://struts.apache.org/

NAME	Submarine
DESCRIPTION	Submarine is a platform created by Apache under Apache license 2.0 and intended for executing Deep/Machine Learning.
LINK	http://submarine.apache.org/

NAME	Synapse
DESCRIPTION	Synapse is an ESB created by Apache under A.L 2.0 with the aim of providing support for several interchange formats.
LINK	http://synapse.apache.org/

NAME	Syncope
DESCRIPTION	Syncope is an O.S. technology created by Apache to administer digital roles in companies.
LINK	http://syncope.apache.org/

NAME	SystemDS
DESCRIPTION	SystemDS is an O.S software created by the Apache Foundation that is intended for machine learning with big data.
LINK	http://systemds.apache.org/

NAME	Tapestry
DESCRIPTION	Tapestry is a Java framework created by Apache under A.L 2.0 intended for creating Java web apps.
LINK	https://tapestry.apache.org/

NAME	TensorFlow
DESCRIPTION	TensorFlow is an O.S. platform developed by Google that is focused in machine learning.
LINK	https://tensorflow.org/

NAME	TensorFlow Playground
DESCRIPTION	TensorFlow Playground is an O.S visualization software created by Google that is intended for neural networks.
LINK	http://playground.tensorflow.org/

NAME	TEZ
DESCRIPTION	TEZ is a framework created by Apache under Apache license 2.0 and intended for displaying complex graphs.
LINK	http://tez.apache.org/

NAME	Thrift
DESCRIPTION	Thrift is a framework created by Apache under Apache license 2.0 and intended for building services for several languages.
LINK	https://thrift.apache.org/

NAME	Tomcat
DESCRIPTION	Tomcat is an O.S. server created by Apache that is intended for JSP.
LINK	http://tomcat.apache.org/

NAME	TomEE
DESCRIPTION	TomEE is the JEE version of the Apache Tomcat server licensed under A.L 2.0
LINK	http://tomee.apache.org/

NAME	Traffic Control
DESCRIPTION	Traffic Control is an O.S. software created by Apache that allows creating CDNs.
LINK	http://trafficcontrol.apache.org/

NAME	Traffic Server
DESCRIPTION	Traffic Server is a server software created by Apache under A.L 2.0 intended for improving the time of response and some other tasks.
LINK	http://trafficserver.apache.org/

NAME	Turbine
DESCRIPTION	Turbine is a framework created by Apache under Apache license 2.0 and intended for building web apps.
LINK	http://turbine.apache.org/

NAME	TVM
DESCRIPTION	TVM is an O.S framework for GPU/CPU created by Apache that is focused in Machine Learning and intended for optimizing backends.
LINK	http://tvm.apache.org/

NAME	Upspin
DESCRIPTION	Upspin is an Open Source framework for sharing files created by Google and focused in the security.
LINK	https://upspin.io/

NAME	Usergrid
DESCRIPTION	Usergrid is a backend created by Apache that is focused on mobile apps. It is available under Apache license 2.0
LINK	http://usergrid.apache.org/

NAME	Velocity
DESCRIPTION	Velocity is a Java software created by the Apache Foundation under A.L 2.0 with the aim of providing a template language.
LINK	http://velocity.apache.org/

NAME	WebM
DESCRIPTION	WebM is an O.S. compressed video format that is intended to be used in HTML5.
LINK	http://www.webmproject.org/

NAME	Whimsy
DESCRIPTION	Whimsy is a set of tools created by the Apache Foundation under A.L 2.0 and intended for automating processes and displaying data.
LINK	http://whimsical.apache.org/

NAME	Wicket
DESCRIPTION	Wicket is an O.S. framework developed by Apache with the objective of creating web apps using Java.
LINK	http://wicket.apache.org/

NAME	Wilma
DESCRIPTION	FIWARE Wilma is an Enabler designed to perform proxy functions by using OAuth2/PEP.
LINK	https://fiware-pep-proxy.rtfd.io/

NAME	Wirecloud
DESCRIPTION	Wirecloud is an Enabler intended for dashboard development.
LINK	https://wirecloud.rtfd.io/

NAME	WS02 API Manager
DESCRIPTION	API Manager is an Open Source API platform developed by WS02 that provides secure access/microservices.
LINK	https://wso2.com/api-management/

NAME	WSO2 Enterprise Integrator
DESCRIPTION	The WSO2 Enterprise Integrator is an O.S. platform created by WSO2 that is designed to be used as ESB and for streaming.
LINK	https://wso2.com/integration/

NAME	Xalan
DESCRIPTION	Xalan is a set of libraries created by the Apache Foundation under A.L 2.0 intended for transforming XML documents using style sheets.
LINK	http://xalan.apache.org/

NAME	Xerces
DESCRIPTION	Xerces is a software created by Apache under Apache license 2.0 that is in charge of XML parsers and other components.
LINK	http://xerces.apache.org/

NAME	XML Graphics
DESCRIPTION	XML Graphics is a software created by the Apache Foundation under A.L 2.0 that is in charge of converting XML to graphics.
LINK	https://xmlgraphics.apache.org/

NAME	Yetus
DESCRIPTION	Yetus is a set of libraries/tools created by Apache under Apache license 2.0 designed to allow user contribution to projects.
LINK	http://yetus.apache.org/

NAME	ZooKeeper
DESCRIPTION	ZooKeeper is an O.S. service created by Apache that allows distributed synchronization and several other services.
LINK	https://zookeeper.apache.org/

NAME	ZXing
DESCRIPTION	ZXing is a code library for Java created by Google under Apache license 2.0 that is designed to process barcodes.
LINK	https://github.com/zxing/zxing