Tracxn BlueBox : Artificial Intelligence — February 2017
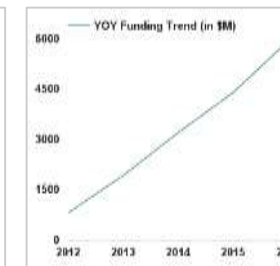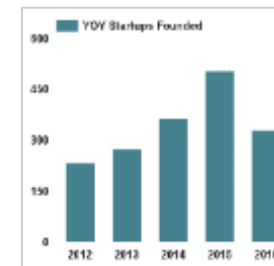
2450+ companies tracked, **900** funded in last 5 years, ~**$5.9B** invested in 2016-17
Most Active Investors: In-Q-Tel, NEA, Khosla Ventures, Y Combinator, Intel Capital, Data Collective

INFRASTRUCTURE — $2.7B

MACHINE INTELLIGENCE SYSTEMS — $539M

MACHINE LEARNING
Data Robot (2012, $57M)

DEEP LEARNING
Sentient (2007, $144M)

COGNITIVE SYSTEMS
Vicarious (2010, $72M)

COMPUTER VISION — $493M

COMPUTER VISION PLATFORMS
EyeSight Technologies(2005, $33M)

OBJECT RECOGNITION
Clarifai(2013, $41M)

FACE RECOGNITION
SenseTime (2014, $130M)

NATURAL LANGUAGE PROCESSING — $443M

NLP PLATFORMS
Nuence (1992, IPO)

SPEECH SOLUTIONS
Cogito Corporation (2007, $22M)

TEXT SOLUTIONS
Cortical (2011, $5M)

CONVERSATIONAL AI
Artificial Solutions (2001, $19M)

ENABLING TECHNOLOGY — $1.1B

HARDWARE
KnuEdge (2005, $100M)

SOFTWARE
Trifacta (2012, $76M)

AUTONOMOUS SYSTEM ENABLERS — $98M

ROBOTICS
CloudMinds (2015, $30M)

VEHICLE
NetraDyne(2015, $16M)

DRONE
Skydio (2014, $3M)

APPLICATIONS — $13B

ENTERPRISE — $7.7B

BI & ANALYTICS

BUSINESS INTELLIGENCE
Palantir (2004, $2.3B)

SOCIAL MEDIA INTELLIGENCE
Dataminr (2009, $175M)

SECURITY & SURVEILLANCE
Cylance (2012, $177M)

MARKETING
BloomReach (2009, $97M)

SALES
InsideSales (2004, $250M)

CUSTOMER SERVICE
Interactions (2004, $160M)

INDUSTRY — $5B

HEALTHCARE & PHARMA
iCarbonX (2015, $215M)

FINTECH
ThreatMetrix (2005, $92M)

TRANSPORT
Zoox (2013, $290M)

RETAIL & E-COMMERCE
Blippar (2011, $99M)

ADVERTISING
RocketFuel (2008, IPO)

EDUCATION
Knewton (2008, $157M)

CONSUMER — $843M

INTELLIGENT DEVICES
Roobo (2014, $100M)

RECOMMENDER SYSTEMS
SwiftKey (2008, Acq.)

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Infrastructure – Enabling Technologies – Most Funded Companies

	Company	Overview	Business Model	Funding Amount
	Mobileye (1999, Jerusalem)	Vision-based advanced driver assistance systems *Fidelity Investments, Goldman Sachs, Motorola Solutions, BlackRock, Enterprise, Colmobil Corp., The Delek Group, Eldan Car Rental, First International Bank of Israel, Wellington Management, Sailing Capital*	Enabling Technologies > Hardware > Processors	$515M
	KnuEdge (2005, San Diego)	Voice recognition and Machine intelligence solutions *Hasso Plattner Ventures*	Enabling Technologies > Hardware > Processors	$100M
	Movidius (2005, San Mateo)	Developing mobile vision processor chips *WestSummit Capital, Enterprise Ireland, AIB Seed Capital Fund, Atlantic Bridge Capital, Celtic House Venture Partners, ARCH Venture Partners, Robert Bosch Venture Capital, Capital-E Partners, Emertec Gestion, Enterprise Equity, Sunny Optical Technology, Summit Bridge Capital, Draper Esprit*	Enabling Technologies > Hardware > Processors	$86.5M
	Trifacta (2012, San Francisco)	Self-service data preparation software *Accel Partners, Greylock Partners, Infosys, XSeed Capital, Data Collective, Ignition Partners, Cathay Capital, Milliways Ventures, Cathay Innovation*	Enabling Technologies > Software > Data Preparation	$76.3M
	Paxata (2012, Redwood City)	Adaptive Data Preparation platform *Accel Partners, Microsoft Ventures, Intel Capital, Toba Capital, Walden International, EDBI, In-Q-Tel, Cisco Investments, Cross Continental Ventures, Telekom Capital, Airtree, Walden Riverwood Ventures*	Enabling Technologies > Software > Data Preparation	$60.99M
	AISpeech (2008, Suzhou)	Intelligent speech recognition tool *DCM Ventures, Tuspark Ventures, Legend Star, Legend Star*	Enabling Technologies > Hardware > Electronic Systems	$45M
	Tamr (2012, Cambridge)	Automated data cleaning and curation *NEA, Thomson Reuters, GV, Work-Bench, MassMutual Ventures, Hewlett Packard Ventures, SineWave Ventures*	Enabling Technologies > Software > Data Preparation	$41.2M

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Infrastructure – Machine Intelligence Systems – Most Funded Companies

Company	Overview	Business Model	Funding Amount
Sentient.ai (2007, San Francisco)	Massively scaled AI and deep learning *Tata Communications, Horizons Ventures, Access Industries, ICH Group*	Machine Intelligence Systems > Deep Learning	$143.78M
Vicarious (2010, San Francisco)	Human-level intelligence in vision, language, and motor control *Samsung, Khosla Ventures, ABB Group, AME Cloud Ventures, Founders Fund, Felicis Ventures, Data Collective, Bezos Expeditions, Formation 8, Good Ventures, Open Field Capital, zigfund.com, Wipro Ventures, zeroth.ai*	Machine Intelligence Systems > Cognitive Learning	$72M
DataRobot (2012, Boston)	Machine Learning Platform for Predictive Analysis *IA Ventures, NEA, Atlas Venture, Intel Capital, Techstars, Recruit Strategic Partners, Right Side Capital Management, New York Life Insurance, Accomplice*	Machine Intelligence Systems > Machine Learning	$57.42M
DeepMind (2011, London)	Deep learning AI *Founders Fund, Horizons Ventures, TrueBridge Capital Partners, Darwin Ventures, zeroth.ai*	Machine Intelligence Systems > Deep Learning	$50M
H2O.ai (2012, Mountain View)	Scalable Machine learning API for Enterprises *Nexus Venture Partners, Transamerica, Transamerica Ventures, Paxion Capital Partners, Capital One Growth Ventures*	Machine Intelligence Systems > Machine Learning	$30.62M
Numenta (2005, Redwood City)	Machine Intelligence Software on the Principles of the Neo Cortex	Machine Intelligence Systems > Cognitive Learning	$29.6M
Turi (2013, Seattle)	Machine learning platforms for developers to build intelligent applications for Big data analytics. *NEA, Opus Capital, Madrona Venture Group, Vulcan Capital*	Machine Intelligence Systems > Machine Learning	$25.25M
Nervana Systems (2014, San Diego)	Deep learning infrastructure *SV Angel, AME Cloud Ventures, Draper Fisher Jurvetson, CME Group, Data Collective, Allen & Company, Lux Capital, In-Q-Tel, Fuel Capital, Playground Global, Omidyar Technology Ventures*	Machine Intelligence Systems > Deep Learning	$25.02M

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Infrastructure – Natural Language Processing – Most Funded Companies

	Company	Overview	Business Model	Funding Amount
	Tellme (1999, Mountain View)	Voice Recognition Technology AT&T, SV Angel, Benchmark Capital, KPCB, Sherpalo Ventures, Saints Capital, Millennium Technology Value Partners, Bridgescale, Attractor Ventures, Van Wagoner Capital Management	Natural Language Processing > Speech Solutions > Speech Recognition	$107M
	SpinVox (2003, New York City)	Voice to Text service Goldman Sachs, Man Group, Toscafund Asset Management, BlueMountain Capital Management	Natural Language Processing > Speech Solutions > Speech to Text	$106M
	Cogito Corporation (2007, Boston)	Caller Behavioural science for sales and service Salesforce, OpenView, Romulus Capital, Western Technology Investment, Pelion Venture Partners, NIMH	Natural Language Processing > Speech Solutions > Speech Analytics	$22.5M
	VoiceBase (2010, Novato)	API's for speech recognition and speech analytics Ecosystem Ventures, Band of Angels, Polytech Ecosystem Ventures	Natural Language Processing > Speech Solutions > Speech to Text	$20M
	Artificial Solutions (2001, Barcelona)	Platform for Natural Language Interaction development Western Technology Investment, Scope Capital Advisory	Natural Language Processing > Conversational AI	$18.74M
	Promptu (2000, Menlo Park)	Platform for making voice powered applications Steelpoint Capital Partners, Lauder Partners	Natural Language Processing > Speech Solutions > Speech Recognition	$17.2M
	MindMeld (2011, San Francisco)	Platform to develop intelligent conversational interfaces Greylock Partners, Bessemer Venture Partners, Intel Capital, GV, IDG ventures, Telefonica, Fenox Venture Capital, Quest Venture Partners, KPG Ventures, TenOneTen, IDG Ventures USA, In-Q-Tel, Liberty Global, Wescott, Samsung Venture Investment	Natural Language Processing > Conversational AI	$15.4M

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Infrastructure – Enabling Technologies – Business Model Description

Companies which provide technology to enable development of artificial intelligence based applications or platform. Includes companies providing software for improved data collection/preparation. Also includes companies providing specialized hardware like processors for faster processing.

Software

Companies providing solutions for data extraction, data preparation, data training, etc. to be used by Machine Intelligence Systems. Also, includes companies providing platform or workbench for AI application development.

Hardware

Companies providing specialized hardware like processor, electronic systems which accelerate the processing power for machine learning/ deep learning inference and training

Infrastructure – Machine Intelligence Systems – Business Model Description

Companies which provide cloud-hosted platforms, APIs or libraries for machine learning and deep learning. Also includes companies developing algorithms which can demonstrate Artificial General Intelligence (AGI)
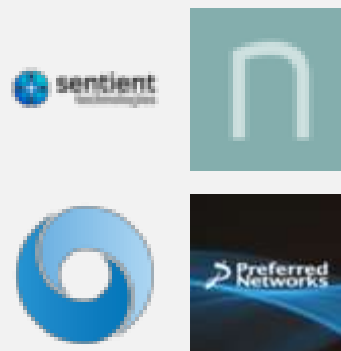
Machine Learning

Companies providing Machine Learning platforms, APIs, libraries that can learn from and make predictions on data
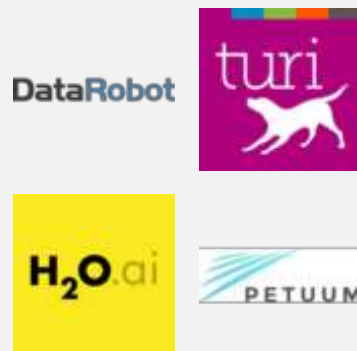
Deep Learning

Companies providing deep learning based platform which will help in implementing techniques such as convolutional multi-layer neural networks, deep neural networks

Cognitive Learning

Companies providing platform or infrastructure for building general purpose algorithms based on the concepts of cognitive sciences, human problem-solving skills and operation research.

Infrastructure – Computer Vision – Business Model Description

Companies providing platforms to analyse the visual content of an image or a video as well as recognize and classify object within an image/video. Also, includes companies providing technologies for facial expression recognition and behavior / emotion analytics

Computer vision platform

Companies providing general purpose platform to develop applications for different computer vision use cases like object recognition, face recognition, image processing, etc.
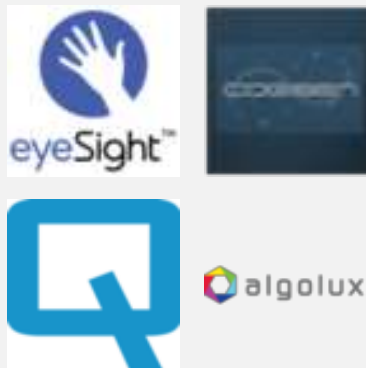
Object Recognition

Companies providing platform which can recognize or tag or caption objects from images and videos

Face Recognition

Companies providing a platform for facial expression recognition and behavior/emotion analytics solutions for use cases in security, retail, healthcare, etc.

Infrastructure – Natural Language Processing – Business Model Description

Companies providing infrastructure which enables machines to recognize and process speech / text and generate natural language based insights from data. Also, includes companies providing solutions for conversation systems.

NLP Platforms	Speech Solutions	Text Solutions	Conversational AI
Companies providing general-purpose NLP platforms for speech or text related solutions	Companies providing platforms, APIs, framework, etc. for speech related solutions like automatics speech recognition (ASR), speech analytics and speech to text conversations	Companies providing platforms, APIs, framework, etc. for text related solutions like text analytics, automatic language translation, and others	Companies providing technology enablers to develop conversational systems

Infrastructure – Autonomous Systems Enablers – Business Model Description

Companies developing tech enablers to built autonomous systems like autonomous car, autonomous drones, etc.

Vehicles	Drones	Robotics
Tech enablers for autonomous vehicle systems	Tech enablers for autonomous drone systems	Tech enablers for autonomous robotic systems

Applications – Enterprise – Business Model Description

Companies developing Artificial Intelligence based applications for various functions within an enterprise

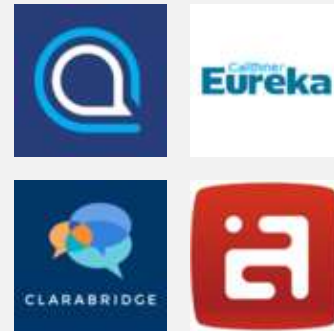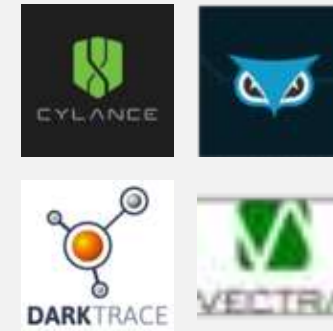| BI & Analytics	Marketing	Customer Service	Security & Surveillance	Sales
Companies providing platforms for analysing structured / unstructured data to extract insights from enterprise data, social media monitoring, etc.	Companies providing AI enabled Marketing solutions like Lead Scoring, Mobile Marketing, Content Marketing, Customer Engagement, Social Listening and Monitoring, etc.	Companies providing AI enabled applications for different customer service solutions like automated ticket generation, classification, reply, analytics, etc.	Companies providing AI enabled applications to detect (and sometimes prevent) anomalous/fraudulent events with-in a device, network or a location	Companies providing AI-based applications to aid sales teams for lead generation and management
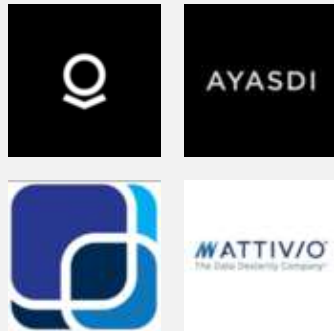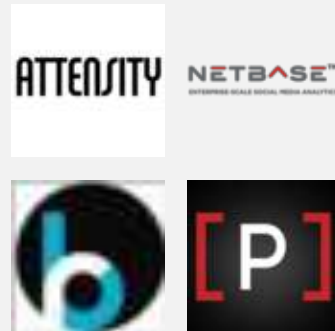
Tracxn
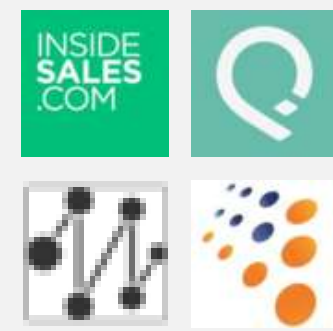
Applications – Industry – Business Model Description

Companies developing applications leveraging Artificial Intelligence techniques for different industry verticals
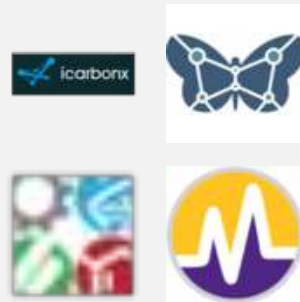
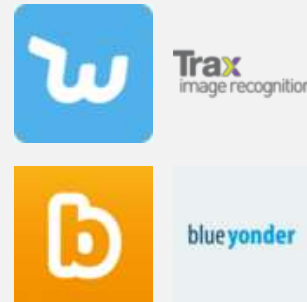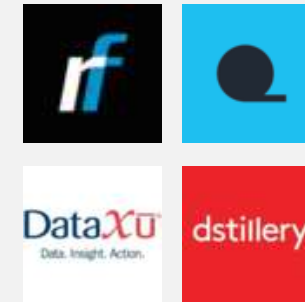| Fintech	Healthcare & Pharma	Retail & eCommerce	Advertising	Legal
Companies providing applications for analysing financial data, social media data using artificial intelligence techniques to aid in formulating a trading strategy, monitor social media for financially relevant information	Companies developing AI enabled applications to get insights from EHR, EMR, Diagnostic Images. Some of these platforms also act as clinical decision support systems, virtual assistant, and aid in drug discovery.	Companies providing applications which leverage AI techniques to enable better product recommendations, product discovery on e-commerce platforms, traffic flow and dwell time monitoring for retail stores.	Companies providing AI enabled applications or software focusing on Advertisement industry like programmatic Ad buying, data management, targeting, re-targeting and cross-device targeting	Companies providing Machine Learning / NLP based platforms for Legal contract/document/case analytics

Applications – Consumer – Business Model Description

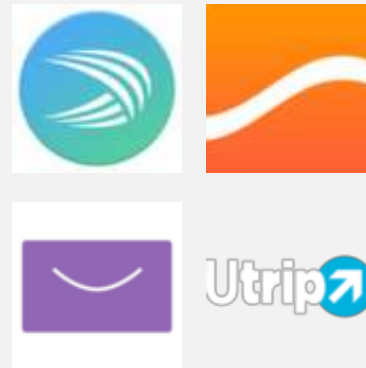Companies developing AI-enabled applications/systems for consumer use cases

Virtual Assistants	Recommender Systems	Intelligent Devices
Conversational assistants/Virtual Assistants based artificial intelligence	Companies providing applications for recommender systems used in areas like food discovery, wealth management, product recommendation etc.	Companies developing AI-enabled social robots, companion robots, smart camera, etc.

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Tracxn BlueBox : Blockchain

December 2016

700+ companies in the sector, **218** funded, **$714M** invested in 2015/2016
Most Active Investors: Digital Currency Group, Fenbushi Capital, Pantera Capital, Blockchain Capital

FINANCIAL SERVICES $502M

Trading	Payments
Digital Asset Holdings (2014, $67M)	*Ripple Labs (2012, $91M)*
Trade Finance	**Risk Management**
Fluent Network (2014, $2.5M)	*BitGo (2013, $12M)*

TECHNOLOGY ENABLERS $261M

Side Chain	Application Development Platforms
Blockstream (2014, $76M)	*Bitfury (2012, $65M)*
Smart Contracts	**Service Providers**
Mirror (2011, $13M)	*TradeBlock (2013, $2.8M)*

CONSUMER $26M

Prediction Markets
Augur Project (2014, $5M)
Gaming Platform
FirstBlood Technologies (2016, $5.5M)

ENTERPRISE SOLUTIONS $117M

Internet of Things
Filament (2012, $11M)
Distributed Storage
Keybase (2013, $11M)

Practice Area – FinTech | Analyst: @deepjyotideb93

Cumulative *funding in the sector*

Tracxn

Financial Services – Most Funded Companies

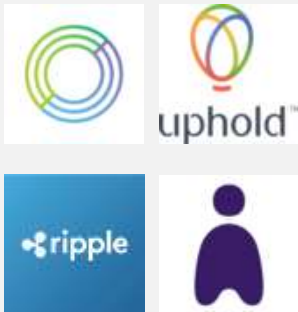|	Company	Overview	Business Model	Funding Amount
	Circle (2013, Boston)	Digital currency wallet for global money transfers *Accel Partners, Goldman Sachs, Baidu, General Catalyst Partners, IDG Capital Partners, Oak Investment Partners, CICC, CreditEase, China Everbright, Fenway Summer, Breyer Capital, Pantera Capital, Wanxiang America, Digital Currency Group*	Financial services > Payments > Money Transfer > P2P	$136M
	Ripple (2012, San Francisco)	Open source payment protocol *Standard Chartered, AME Cloud Ventures, Seagate, CME Group, IDG Capital Partners, RRE Ventures, Venture 51, Core VC, ChinaRock Capital Management, SBI Holdings, Route 66 Ventures, Camp One Ventures, Blockchain Capital, Santander InnoVentures, Digital Currency Group, SCB Digital Ventures*	Financial services > Payments > Money Transfer > B2B	$90.5M
	Digital Asset Holdings (2014, New York City)	Market level solutions based on Blockchain *Accenture, IBM, Goldman Sachs, Broadridge Financial Solutions, Citigroup, J.P. Morgan, CME Group, BNP Paribas, ABN AMRO Bank, Australian Securities Exchange, PNC Financial Services Group, Deutsche, DTCC, ICAP, FinTech Innovation Lab, Santander InnoVentures*	Financial services > Trading > Capital markets	$67.16M
	itBit (2012, Tower)	Provider of Trading & Settlement platforms *Canaan Partners, RRE Ventures, Liberty City Ventures, Raptor Group, Blockchain Capital, Digital Currency Group*	Financial services > Trading > Capital markets	$28.25M
	JUZHEN (2014, Shanghai)	Blockchain technology provides for financial institutions *Wanxiang Group Corporation*	Financial services > Trading > Capital markets	$22.5M
	PeerNova (2013, San Jose)	Provider of cryptographic development platform *Overstock, Crypto Currency Partners, Mosaik Partners, Blockchain Capital*	Financial services > Trading > Capital markets	$19.6M
	Uphold (2014, San Francisco)	Multiple currency reserve and exchange platform.	Financial services > Payments > Money Transfer > P2P	$15.52M
	Abra (2014, Mountain View)	Fiat money remittance based on bitcoin *First Round Capital, American Express, MESA Ventures, Jungle Ventures, RRE Ventures, Liberty City Ventures, Silicon Badia, Arbor Ventures, Valor Capital Group, Future Perfect Ventures, Pantera Capital, Nyca Partners, Carthona Capital, Lerer Hippeau Ventures, Blockchain Capital, Digital Currency Group, Fenbushi Capital*	Financial services > Payments > Money Transfer > P2P	$14M

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Technology – Most Funded Companies

Company	Overview	Business Model	Funding Amount
Blockstream (2014, San Francisco)	Blockchain development focused on sidechains innovation *Khosla Ventures, AME Cloud Ventures, Innovation Endeavors, Data Collective, Horizons Ventures, Ribbit Capital, Real Ventures, Digital Garage, DG Incubation, SK Ventures, Future Perfect Ventures, Maiden Lane, Mosaic Ventures, Blockchain Capital, AXA Strategic Ventures, Seven Seas Partners*	Technology > Sidechain	$76M
Bitfury (2012, San Francisco)	Provider for Bitcoin mining hardware *DRW, Investment Fund, Crypto Currency Partners, Binary Financial, ZAD, Blockchain Capital, QueensBridge Venture Partners, iTech Capital*	Technology > Application development platform	$65M
Chain (2014, San Francisco)	Designing blockchain applications for organizations *Capital One, VISA, Nasdaq, SV Angel, Khosla Ventures, Thrive Capital, RRE Ventures, Betaworks, Homebrew, Fiserv, Orange, Firestartr, Pantera Capital, ventures.citi.com, Blockchain Capital, Digital Currency Group, BoxGroup*	Technology > Application development platform	$43.7M
Mirror (2011, New York City)	OTC trading & hedging platform provider *Battery Ventures, Correlation Ventures, Crosslink Capital, Promus Ventures, Ludlow Ventures, RRE Ventures, Boost VC, Route 66 Ventures*	Technology > Smart Contracts > Financial Assets	$12.8M
Colu (2014, Tel Aviv)	Bitcoin based asset issuance and management platform *Spark Capital, Aleph Venture Capital, Digital Currency Group, BoxGroup*	Technology > Application development platform	$12.1M
Gem (2014, Venice)	Platform to develop blockchain applications *First Round Capital, MESA Ventures, Metamorphic Ventures, RRE Ventures, Tekton Ventures, Pelion Venture Partners, Siemer Ventures, Baroda Ventures, Birchmere Ventures, KEC Ventures, Idealab, Amplify, Birchmere Labs, Crypto Currency Partners, Wavemaker Partners, Blockchain Capital, Digital Currency Group, Fenbushi Capital*	Technology > Application development platform	$10.4M
Tech bureau Lab (2015, Osaka)	Japanese cryptocurrency technology company and Bitcoin Exchange operator *Nippon Technology Venture Partners, Infoteria, OKWAVE, Arara, Money Partners Group, Hiroshima Venture Capital*	Technology > Application development platform	$7.04M
Synereo (2014, Tel Aviv)	Distributed and decentralized social network	Technology > Application development platform	$4.7M

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Financial Services – Business Model Description

Applications of Blockchain Technology in Financial Services

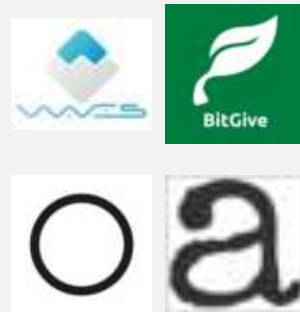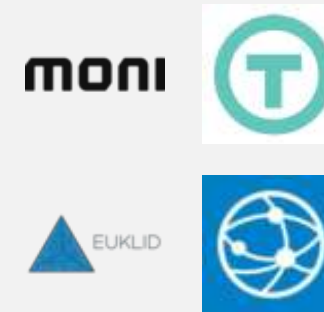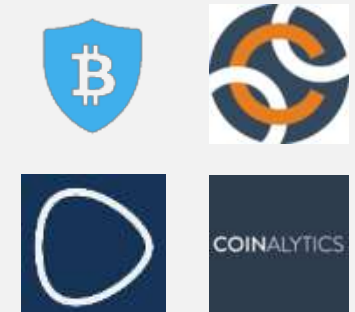| Payments	Trading	Investing	Banking	Risk management
Companies enabling payments through blockchain	Blockchain based trading/setllement/market level solutions	Investing and crowdfunding platforms that enable digital asset tokenization	Blockchain based banking solutions	Blockchain security and risk management

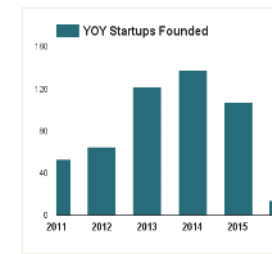# Tracxn BlueBox : IoT Infrastructure

December 2016

950+ companies in the sector, **200** funded in last 5 years, **~$1.5 Bn** invested in 2015/16
Most Active Investors: Intel Capital, Techstars, 500 Startups, Cisco, DFJ, Momenta

HARDWARE AND SOFTWARE MODULES

HARDWARE MODULES — $983M

Networking Hardware
TTTech (1998, $85.6M)

Smart Tags
Impinj (2000, $131.5M)

Low Power Chips and SoCs
Altierre (2003, $81.5M)

Beacon
Estimote (2012, $14.1M)

Sensor SDK and Platform
Sensicast Systems (1985, $13M)

Prototyping Hardware
Particle (2012, $4.9M)

SOFTWARE MODULES — $161M

Developer Platforms & SDKs
Neura (2013, $13.02M)

Communication
K4connect (2013, $9.9M)

Operating System
Prodea (2006, $100M)

Data Services
Teraki (2014, $18.15K)

IoT NETWORKS — $600M

NETWORK PROVIDER

Licensed
Soracom (2015, $34M)

Unlicensed
Sigfox
(2009, $152.1M)

Mesh Networks
Eero (2014, $90M)

SECURITY — $511M

Hardware Level Security
Inside Secure (1995, $181.4M)

Network Level Security
Mocana (2004, $87M)

IoT PLATFORMS — $2.0B

Application Development Platforms
Pubnub (2010, $46.6M)

End to End Platforms
Prodea (2006, $100M)

Network Management Platforms
Silver Spring Network (2002, $282M)

Device Management Platforms
Relayr (2013, $36.3M)

Analytics Platforms
C3 IOT (2009, $134M)

Fog Computing Platforms
Foghorn (2014, $14.5M)

Practice Area – Technology | Analyst: @galaxian

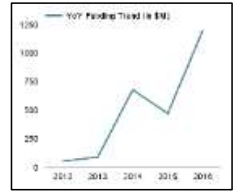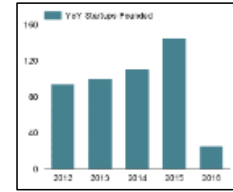Cumulative funding in the sector

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Tracxn BlueBox : Augmented Reality

November 2016

700+ companies in the sector, **167** funded in last 5 years, **$1.7B** invested in 2015-16
Most Active Investors: Techstars, Intel Capital, Rothenberg Ventures, Qualcomm Ventures

TECHNOLOGY PROVIDERS

SOFTWARE — $105M

Developer Tools
NGrain (2000, $12.5M)

Application Software
Improbable (2012, $22M)

Browser
Layar (2009, Acq)

ENABLING TECH — $360M

3D Reconstruction
Movidius (2005, Acq)

NUI
InvenSense (2003, IPO)

Image Recognition
Aquifi (2011, $17M)

DISPLAY MEDIUM — $1.7B

Head-mount Display
Magic Leap (2011, $1.4B)

Head-up Display
Recon Instruments (2008, Acq)

Holographic Display
WayRay (2012, $6M)

CONTENT — $27M

Studio
Penrose Studios (2015, $8.5M)

Platform
Pixvana (2015, $6M)

APPLICATIONS

ENTERPRISE — $384M

Advertising
Blippar (2011, $99M)

Medical
MindMaze(2012, $118.5M)

Custom Branded App
Marxent Labs (2011, $13M)

Field Service
APX Labs (2010, $29M)

CONSUMER — $145M

Games
Niantic (2010, $28M)

Edutainment
Waygo Translator (2011, $1.7M)

Practice Area - Technology | Analyst: @shubhranshu87

Cumulative funding in the sector

Tracxn