

# Edge X Challenge Shanghai 2020

2020 EdgeX 中国挑战赛 2020年7月-10月



INNOSPACE

vmware

DELL Technologies  
戴尔科技集团



ThunderSoft®

Tencent 腾讯

IoTech

# Snapshot

EDGE X FOUNDRY™



Shanghai  
Makers  
上海国际创客大赛

EDGE X FOUNDRY™



INNOSPACE



DELL Technologies



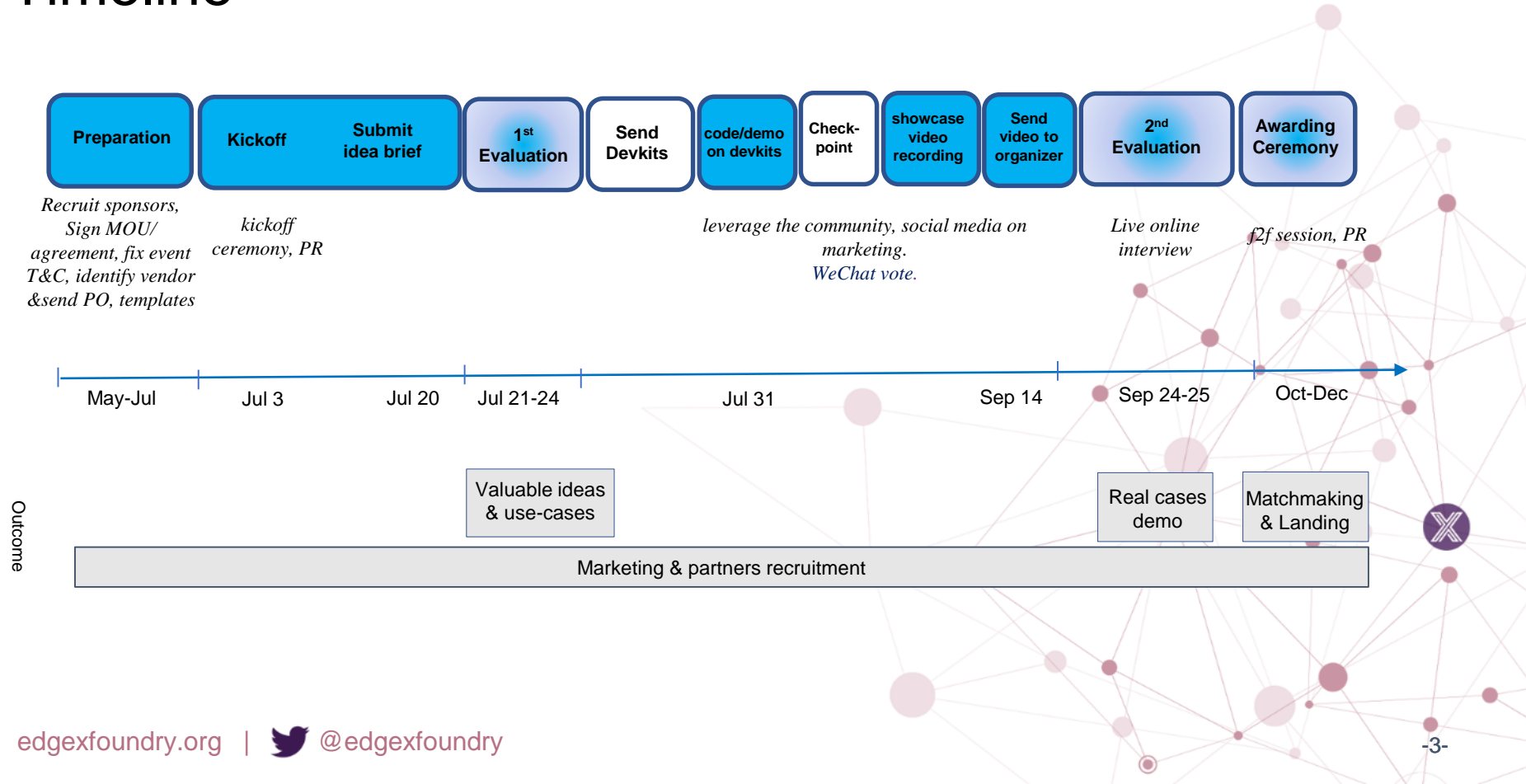
ThunderSoft®

Tencent 腾讯

IoTech

- ❑ Goal: develop innovative use-cases with EdgeX + Computer Vision
- ❑ Host: Linux Foundation, STCSM; co-organized & supported by leading members of EdgeX community
- ❑ Time: July ~ October
- ❑ Two categories: Commerce (retail/banking/hospitality/education, healthcare, cities/campus...), Industrial (Manufacture, Power, Oil/Gas, Utilities)
- ❑ Virtual sessions due to COVID-19 pandemic

# Timeline



# Categories & Reference topics

## 商业 (Retail, Hospitality, Banking, Education, healthcare, cities/campus, ...),

- 1) 利用EdgeX, 基于物联网、人工智能、及数据分析等技术, 在商业场景实现涉及人货场的创新应用。 Using EdgeX, based on IOT, AI and data analysis technologies, build innovative applications related to consumer, merchandise, and store.
- 2) 基于EdgeX, 实现多传感器联动的物联网应用。 Use EdgeX to build multi-sensor correlated IoT applications.
- 3) 利用 EdgeX 架构搭建有利抗击新冠肺炎疫情的应用。 Use EdgeX to build applications beneficial to defeat COVID-19.
- 4) 利用 EdgeX 与5G、区块链、或服务机器人结合, 实现创新应用。 Combine EdgeX with 5G, blockchain or service robot to build innovative applications

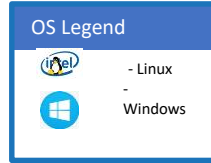
## 工业 (Factories, Power, Oil/Gas, Utilities)

- 1) 针对多边缘结点的场景, 基于EdgeX构建SDN+容器化部署的IT方案。 For the multi-edge node scenario, build an SDN + containerized IT solution based on EdgeX
- 2) 在离散或流程(有更低时延要求)制造业中, 利用EdgeX实现产线上的低延时故障发现和响应。 In discrete or process (with lower latency requirements) manufacturing, use EdgeX to achieve low latency fault detection and response on the production line
- 3) 在离散制造业中, 利用EdgeX实现产品缺陷的在线检测。 In Discrete Manufacturing, use EdgeX to Detect Product Defects Online
- 4) 利用EdgeX采集数据, 进行电/气/煤/油等能源管理, 提高能源利用率。(比如: 构建热力学模型, 完成热表数据采集以及自动的阀开度控制, 实现供热效率的优化)。 Using EdgeX to collect data, proceed with energy management of electric/gas/coal/oil, to improve energy efficiency. (Such as: building a thermodynamic model, completing heat meter data collection and automatic valve opening control to optimize heating efficiency)
- 5) 利用EdgeX实现多数据源远程无人监控, 与现场的环境自动控制。 Using EdgeX to realize remote unmanned monitoring of multiple data sources and automatic control of the on-site environment.



# HW devkits provided by event organizer

## Commerce



- Intel® KBL-H platform
- 2 display output
- Support M.2 SSD Module
- Support M.2 WiFi/BT (Support for CNVI)
- Support 2.5 Inch SATA HDD extension
- Type-C full function
- metal case

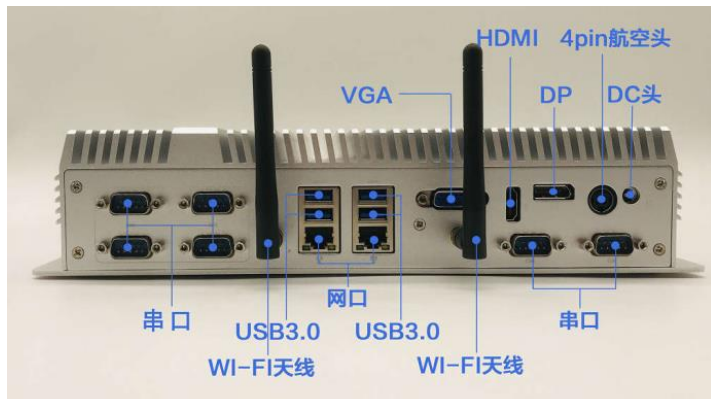


SIDE I/O

Specification	
Dimension	140mm*140mm (PCBA)
OS	WIN10 / Linux
Type	Edge Computing
CPU	Intel® KBL-H I7-7700HQ+Chipset HM175
Power	12~19V/5A
Graphics	Intel® HD Graphics 630
Memory	2* DDR4 SO-DIMM
LAN	4*1000Mbps
Audio	HD Audio
Storage	M.2 SSD 2280 & 2242 SATA 2.5 inch Hard Disk
WIFI/BT	2.4G+5G (802.11 a/b/g/n/ac)(optional ) BT 4.2
IO Port	
Rear IO	2*USB3.0(BC1.2*1)
	1*HDMI
	1*DP
	4*RJ45 1000M Ethernet
	1*Adaptor
Side IO	4*USB 3.0
	1*Power Button
	1*Line In
	1*Line Out
	1*Type C USB3.1
	1*TF card

# HW devkits provided by event organizer

## Industrial



产品规格		参数
主要规格	外观尺寸	310*179*288mm
	内置主机板尺寸	170*170mm
	CPU	7500U
	Audio	左右声道
	内存	1*SODIMM
	存储模式	SATA3.0
	mini PCIE	
	显示接口	VGA+DP+HDMI
	散热方式	主动散热
	DC-IN 头	19 直流
后面板接口	大 4pin 航空头	24 直流
	HDMI	*1
	DP	*1
	VGA	*1
	COM	*6
	WIFI	外置天线*2
	RJ45+USB	*2
	HD Led	*1
	电源 Led	*1
	Power 键	*1
前置板接口	双层 USB 2.0	*1
	RJ45	*2
	音频输入	*1
	音频输出	*1
	SATA	7PIN SATA3.0 *2
	SATA 供电接口	PH 2.54X4*1
内置 IO	内存插槽	SO-DIMM*1
	Mini-PCIE WIFI	*1 (支持 WIFI/3G/4G)
	Mini-PCIE Msata	*1
	Movidius Card	*2
	Power 插针	*1
	PCIE 4X	*1
	串口插针	杜邦 2.0PITCH 2X5 *6
	并口插针	*1
	前置音频插针	*1
	PS/2 插针	*1
适用系统	风扇插座	1.25 PITCH 1X4 *1
	Windows 7/10	32bit/64bit
	Linux	

# EdgeX know-how resources

- ❑ Introduction to EdgeX on wiki page of EdgeX Foundry.
- ❑ Training on EdgeX Hackathon in China community.
- ❑ EdgeX document on public websites & video applications.
- ❑ Technical experts in weChat group of EdgeX Challenge Shanghai 2020.  
(supported by VMware, Intel, IOTech, Thundersoft)
- ❑ On-demand training.



# Judging Criteria

Criteria	Preliminary Round	Final Round
Creativity, use of Computer Vision	30	30
Impact, Viability, and Usefulness	30	30
Simplicity	30	30
Wording & showcase	10	10
# of votes on social media (additional points for final phase)		max 20 points

## Judgers' background

- Industry representatives (commerce, industrial)
- EdgeX representatives



# Prizes

Prizes	Commerce	Industrial	Special prize for EdgeX + OpenVINO
1 <sup>st</sup>	20,000 RMB *1	20,000 RMB *1	10,000RMB*2
2 <sup>nd</sup>	10,000 RMB *1	10,000 RMB *1	
3 <sup>rd</sup>	5,000 RMB *1	5,000 RMB *1	

# Other benefits for EdgeX challenge winners

## ❑ Fast-track for eco-system marketing programs

- ✓ Intel: Open Retail Initiative; MRS/RRK program;  
=> Worldwide partners/opportunities match-making; market development fund; etc.
- ✓ VMware: VIN (*VMware Innovation Network*) program

## ❑ Business opportunities

- ✓ Match-making opportunities associated with “上海浦江创新论坛”
- ✓ Joint promotion with industry associations & events.

## ❑ VC/PE investment

- ✓ Innospace

# How to join the challenge

❑ [EdgexChallenge.shanghaimakers.com](https://EdgexChallenge.shanghaimakers.com)

Step1: Register from website



Step2: Event assistant will contact you



Step3: Get into WeChat group



Step4: Q&A and technical inquiries

Step5: Get the proposal template



Step6: Submit preliminary proposal



Step7: Get a greet T-shirt for the participation



Step8: Get HW devkits if your team is shortlisted for the 2<sup>nd</sup> round challenge

❑ (All merchandise will be sent out via courier)

# Proposal template

2020 EdgeX 中国挑战赛

创意构想作品\*

请为您的队伍起个独一无二的名字								
队员信息 (3-5 人)	姓名	出生年月	工作单位	手机	微信号	邮件	Polo 衫尺寸**	邮编及邮寄地址**
队员 1 (主要联系人)								
队员 2								
队员 3								
队员 4								
队员 5								
关于参赛创意								
赛道 (二选一)		商业(零售, 银行, 酒店与餐饮, 教育, 医疗, 智慧家庭, 智慧城市与园区等)						
		工业(工厂制造, 电力, 石油天然气, 公共事业)						
本创意适用什么场景, 解决什么业务问题, 带来什么价值								
连接哪些外设或传感器								
方案架构及流程框图								

# WeChat contact of event assistant



Scan the code and add assistant





Thank You!