

加氢站运行及经营的几个关键点

The Key Points of Hydrogen Refueling Station in Operation and Management

嘉氢（上海）实业有限公司

Hyfuture (Shanghai) Industrial Co. Ltd.





1、关于嘉氢实业

Hyfuture Profile

2、目前国内加氢站概况

Current Domestic HRS Overview

3、上海嘉定江桥加氢站简介

Introduction of Jiangqiao, Jiading HRS

4、加氢站运行中的几个关键点

Key Points in Operation

5、加氢站经营中的几个关键点

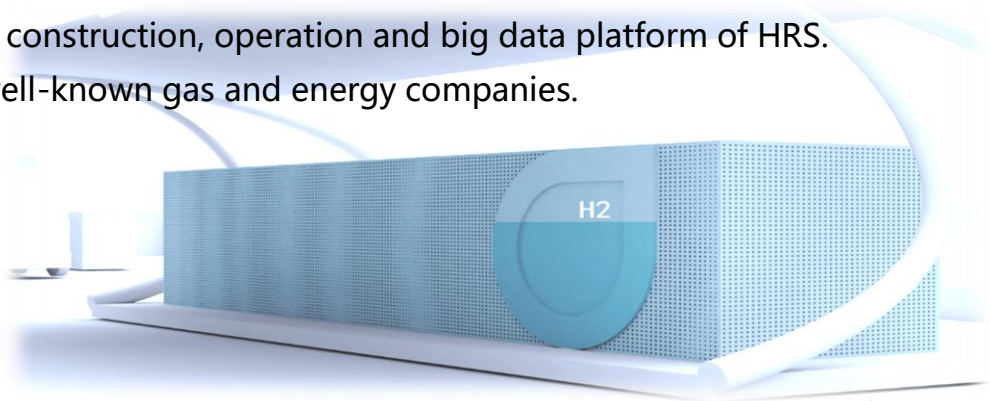
Key Points in Management

关于 嘉氢实业



嘉氢实业

- 嘉氢（上海）实业有限公司成立于2017年10月22日，嘉氢实业是基于公司创始人及核心管理团队对氢能源发展、加氢站技术、加氢基础设施商业模式、氢基础物联网等丰富的经验及深刻的理解，而创立并发展起来。
- 嘉氢实业主要致力于 **氢能源基础设施（加氢站）的投资、建设、运营和大数据平台。**
- 我们的管理团队：**70%来自于知名气体公司和能源公司。**
- The company was founded on the rich experience and profound understanding of the founder and core management team in new energy development, hydrogen fuel cell technology, innovation logistics finance and Internet of things application.
- The company is committed to the investment, construction, operation and big data platform of HRS.
- In our management team, 70% are from the well-known gas and energy companies.



公司愿景

Company Vision

成为中国加氢站行业最具影响力的运营和管理企业

Become the most influential operation and management enterprise in China' s HRS industry

公司使命

Company Mission

提供安全、可靠、经济的氢能源基础设施运营和管理服务

为中国绿色、高效的物流和出行贡献力量

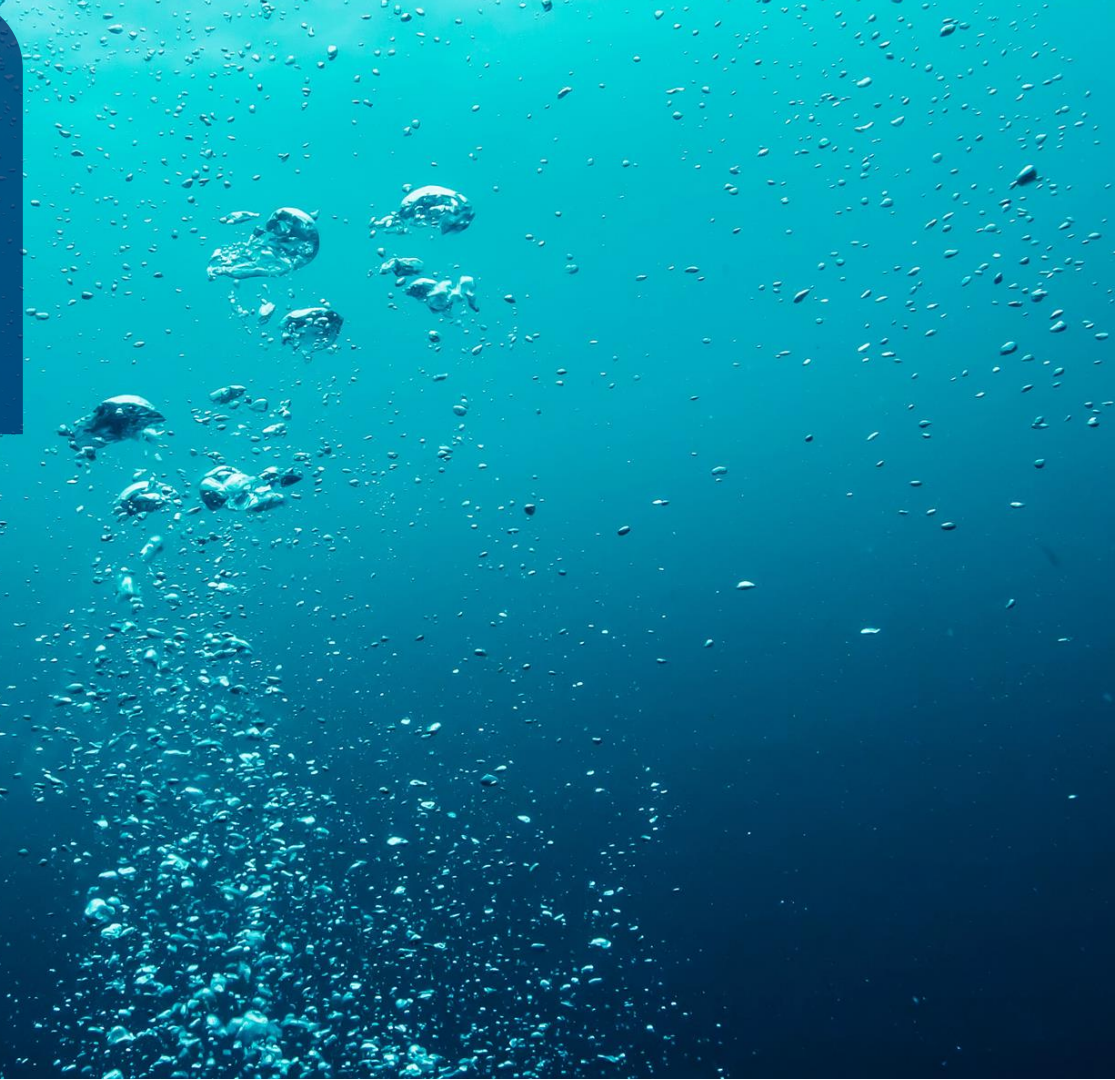
Providing the Hydrogen refueling station both in operation and management that are economically safely and applicable contributes to China' s green and efficient logistics and transportation.



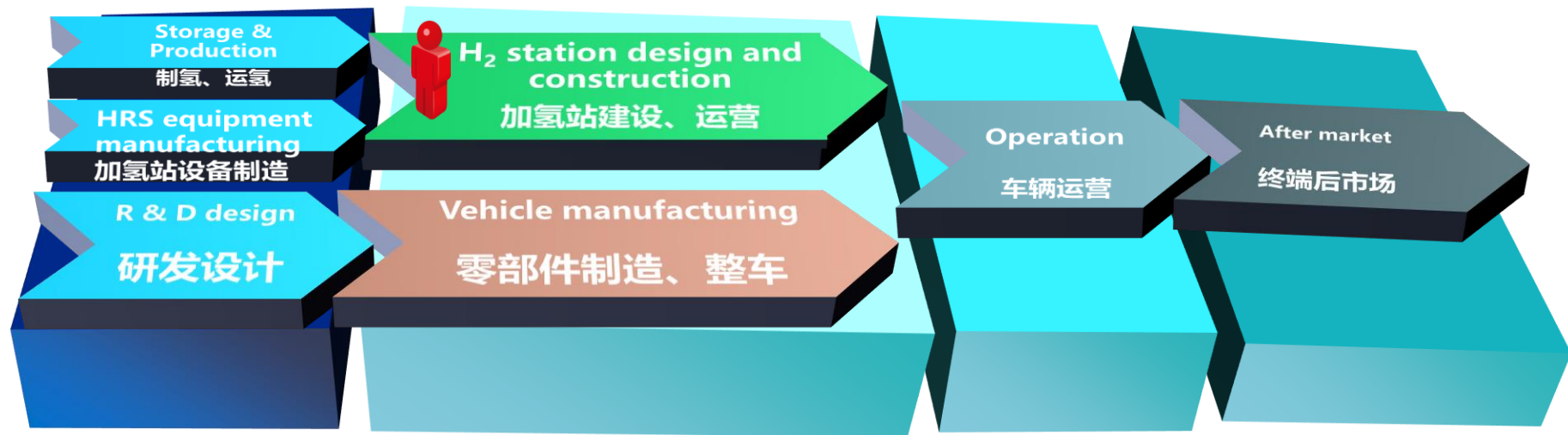


嘉氢实业

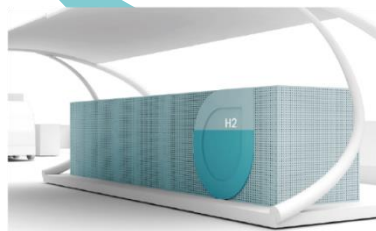
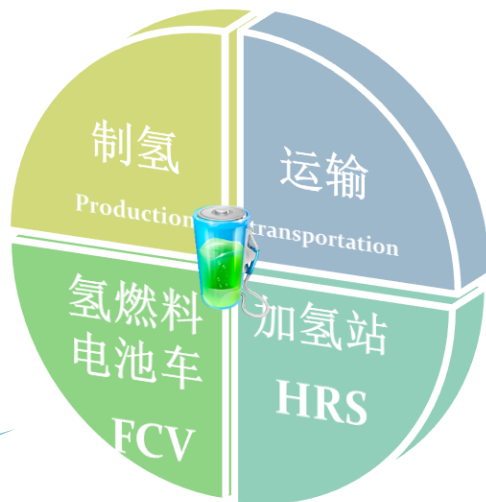
Overview on Current Domestic HRS



➤ 目前国内氢产业链概图 Current Domestic Hydrogen Industry Chain



➤ 我们加氢站的运作模式 Operation Model



据不完全统计，截止2018年9月，我国已建成的加氢站**有17座**，虽部分站已实现商业化运营，但无法满足氢能行业爆发性的增长，**2018年建设及拟建中的加氢站有20余座**，未来国内市场的对加氢站的需求很大。

序号	地点	日加注量 (KG)	名称	建成年份 (年)
1	北京	200	北京永丰加氢站	2006
2	★ 上海	200	上海安亭加氢站	2007
3	★ 郑州	200	郑州宇通加氢站	2015
4	★ 三水	160	三水公交加氢站	2016
5	★ 云浮	200	云浮思劳加氢站	2017
6	佛山南海	200	瑞晖佛山加氢站	2017
7	中山沙朗	1000	中山沙朗加氢站	2017
8	十堰	500	十堰加氢站	2017
9	如皋百应	160	如皋百应能源	2017
10	上海	500	上海电驱动加氢站	2017
11	常熟	——	丰田加氢站	2017
12	大连	400	同济-新源大连加氢站	2018
13	成都	400	郫都区加氢站	2018
14	聊城	200	中通客车加氢站	2018
15	★ 上海	750	上海嘉定江桥加氢站	2018
16	★ 张家口	1000	张家口加氢站	2018
17	武汉	300	中极氢能源加氢站	2018



According to incomplete statistics, as of Sep. 2018, there were 17 HRS has been built in China. Although part of the station has achieved the hydrogen industry explosive growth. In 2018, the total plan in China of HRS are 20, there is a great demand for HRS on domestic market in the coming year.

No.	Location	Daily fluence (KG)	Name	Year built (year)
1	Beijing	200	Yongfeng, Beijing	2006
2	Shanghai	200	Anting, Shanghai	2007
3	★ Zhengzhou	200	Yutong, Zhengzhou	2015
4	★ Sanshui	160	Sanshui public	2016
5	★ Yunfu	200	Silao, Yunfu	2017
6	★ Nanhai, Foshan	200	Ruihui, Foshan	2017
7	Shalang, Zhongshan	1000	Shalang, Zhongshan	2017
8	Shiyan	500	Shiyan	2017
9	Baiying, Rugao	160	Baiying Energy	2017
10	Shanghai	500	Dianqudong	2017
11	Changshu	—	Toyota	2017
12	Dalian	400	Tongji-Xinyuan	2018
13	Chengdu	400	Handu district	2018
14	Liaocheng	200	Zhongtong	2018
15	Shanghai	750	Jiangqiao, Jiading	2018
16	★ Zhangjiakou	1000	Zhangjiakou	2018
17	★ Wuhan	300	Zhongji H2	2018



➤近2年，影响我国加氢站建设缓慢的主要原因

➤Mainly due to the impact of the slow construction of HRS in the past two years.

1、加氢站的
审批
流程繁琐



加氢站的
规划问题

2、加氢站的
建设
成本过高



加氢站的
建设补贴
问题

3、技术法规
的滞后



➤ 液氢部分;
➤ 安全意识
待提高

4、车辆产业
化与加氢
站先后?



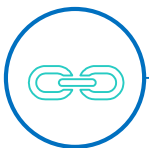
加氢站的运营账问题
✓ 车站联动机制
✓ 合建站经营机制



➤近2年，影响我国加氢站建设缓慢的主要原因

➤Mainly due to the impact of the slow construction of HRS in the past two years.

1、The approval
Process is
cumbersome



HRS planning
problems

2、High
Construction
Cost



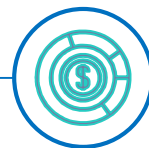
Construction subsidy

3、Technical
regulations
lag



➤ Liquid H₂;
➤ Safety
consciousness

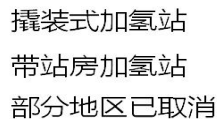
4、
Development
order is not clear



Construction of HRS
operational account
✓ HRS linkage mechanism
✓ Combined station
operating mechanism



The administrative approval process



➤ 目前，市场环境下的加氢站发展趋势

➤ The development trend of HRS in the market environment at this stage.



- 1、在原有CNG加气站、加油站基础上，通过改建、扩建方式，合建加氢站，通过加油站或相关业务的盈利来补贴加氢站。
- Based on the original CNG and gas station, through the renovation, expansion mode, subsidize the HRS through the profit of the gas station or related business.
- 2、主流加氢站形式的趋势：35MPa——35&70MPa——液氢
- Mainstream on HRS trend: 35 Mpa——35&70MPa—— liquid H₂



Jiangqiao, Jiading
Station



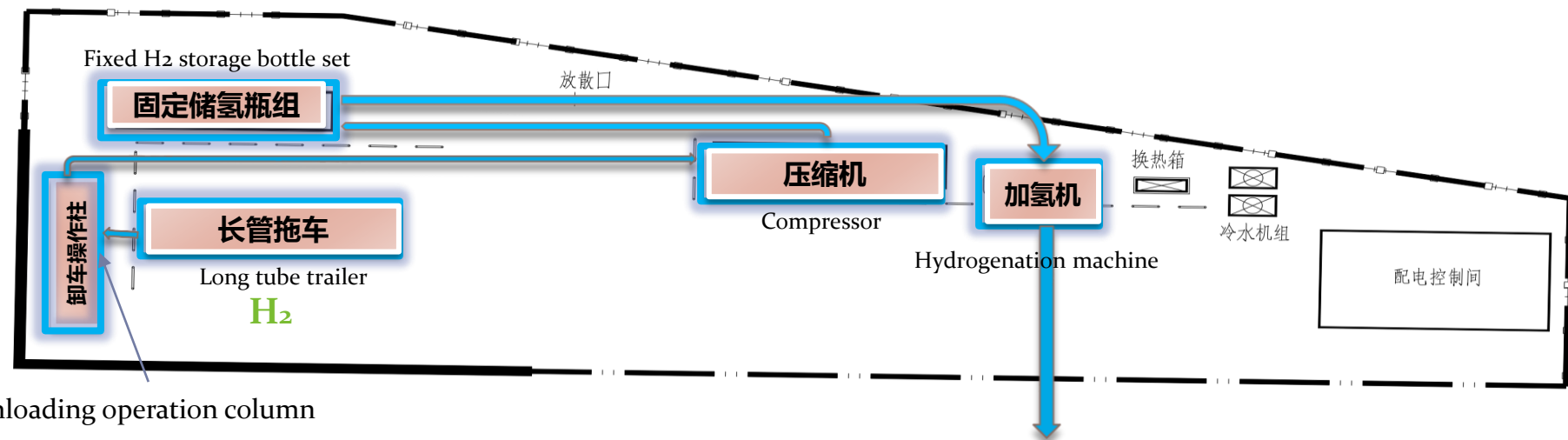
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➤ 上海嘉定江桥加氢站简介 Profile of Jiangqiao, Jiading station

It is located at 1555 lane, Jingyuan Road, Jiading District. Area 1590 m². It's a 750kg/d skid-mounted HRS with a total hydrogen capacity of 848kg, which belongs to the third-level HRS.



江桥加氢站工艺流程图 Jiangqiao station process flow chart





HRS' s main customers



氢车熟路
STNE

STNE-the biggest FCV operation and management company with 500 FCVs



➤ 上海嘉定江桥站主要的客户源 Main customers in Jiangqiao station



Model	EQ5080XXYTF CEV1	Batch	297	Brand	Dongfeng
Total Mass	7,510Kg	Preparation Quality	4,100Kg	Load Quality	3,215Kg
Fuel Type	Hydrogen	Recharge mileages (half, 40KM/H)	> 305Km	Refueling Time	< 10min
Speed limit	85Km/H	Maximum Slop	≥18%	Number of Passengers	3
Length	6,410mm	Width	2,200mm	Height	2,850mm
Cargo Length	3,750mm	Cargo Width	2,150mm	Cargo Height	1,950mm



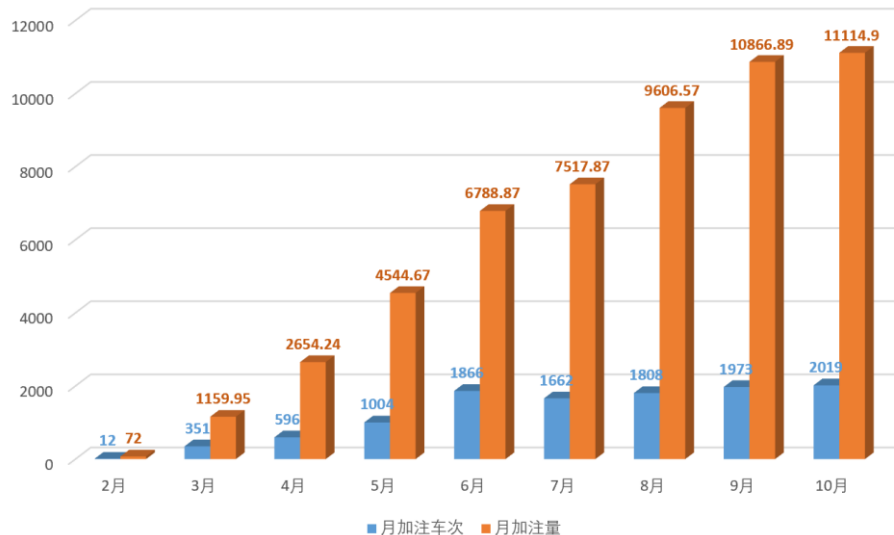
Key Points in Operation



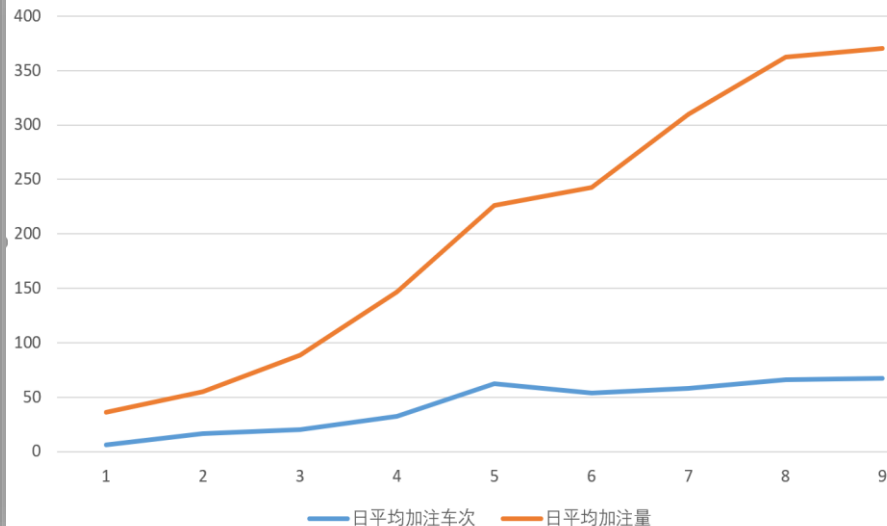
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- 截止至11月13日，累计加氢车次：12597次；累计加氢量：62009.27kg
- As of 10th October, the cumulative number of Hydrogenation trains: 12597 times, cumulative hydrogenation: 62009.27 kg.

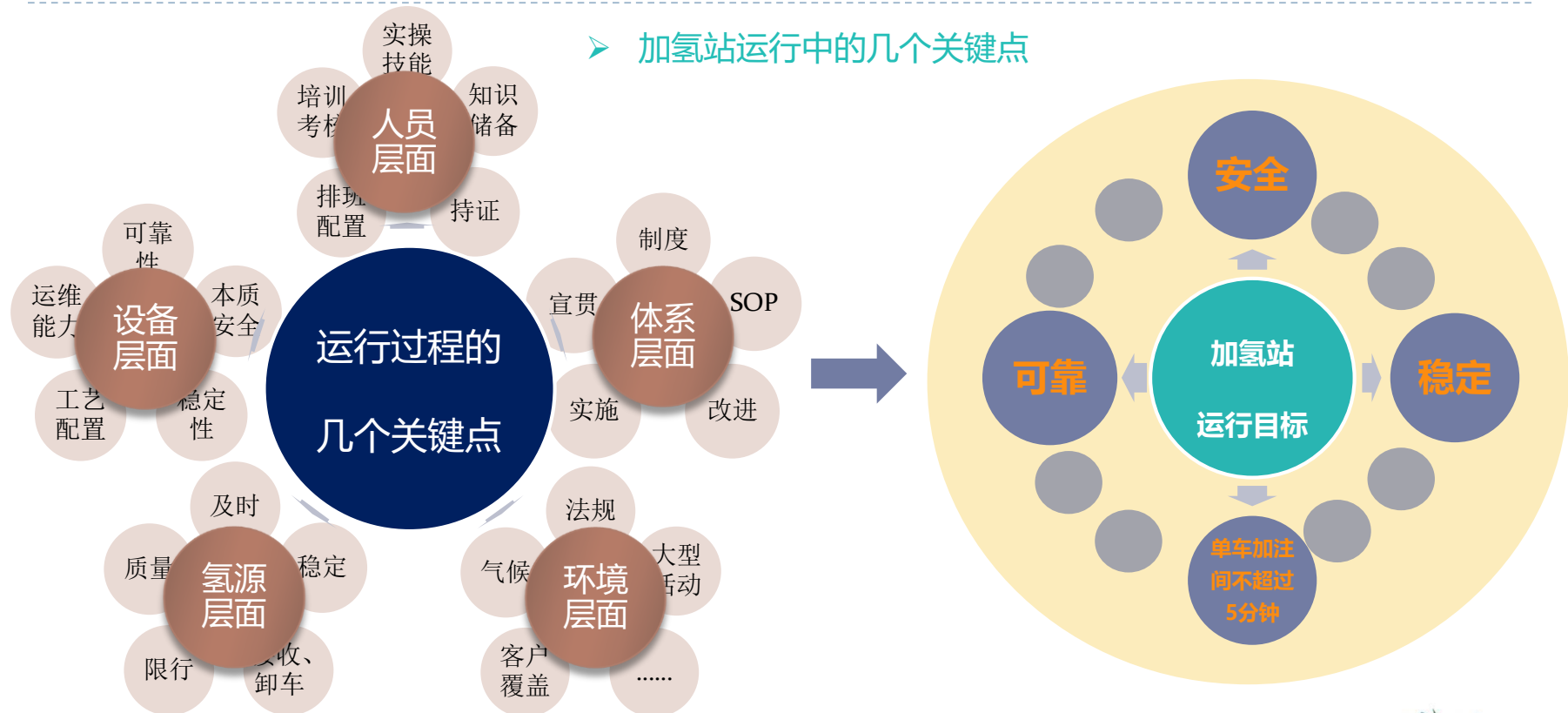
2-10月，加注量及加注车次柱状图



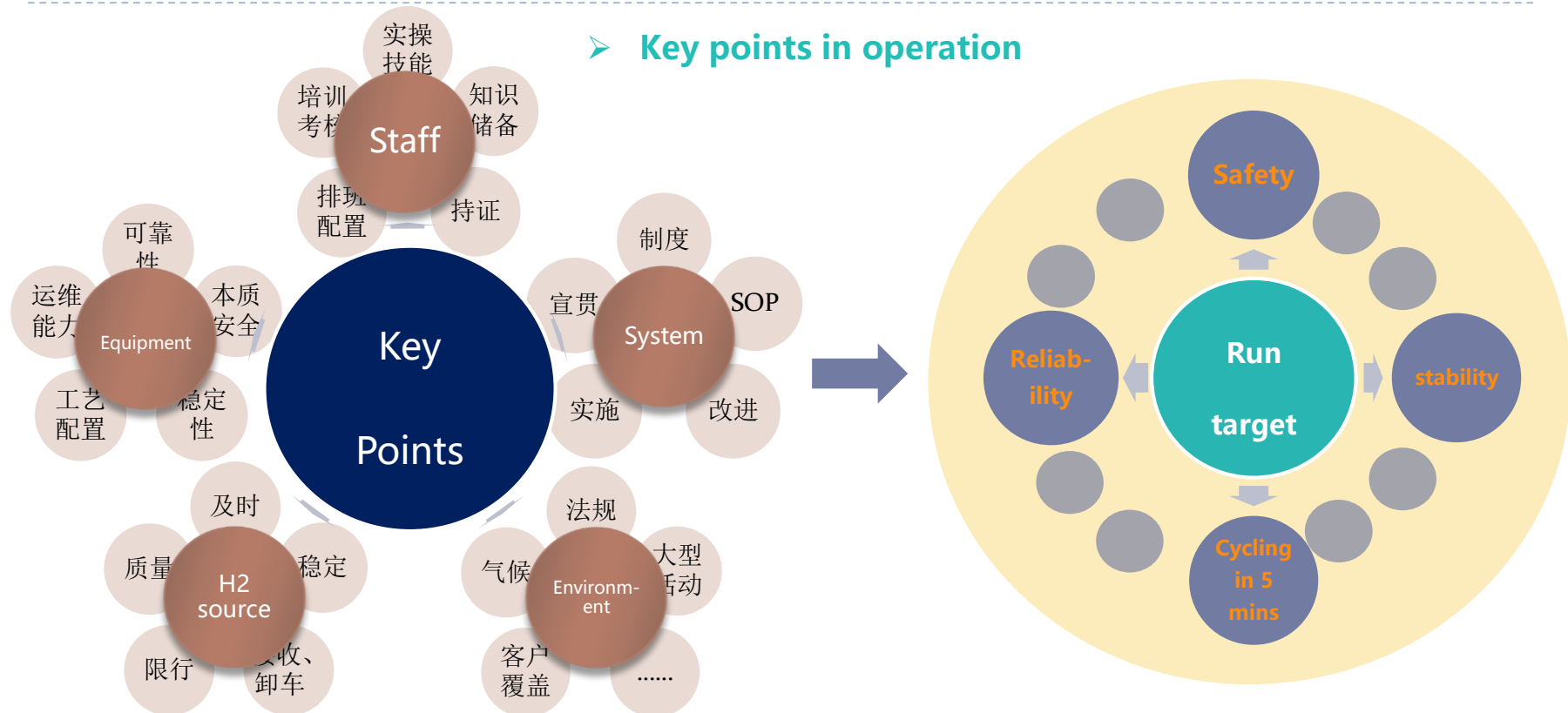
2-10月，日均加注车次及日均加注量折线图



➤ 加氢站运行中的几个关键点



➤ Key points in operation



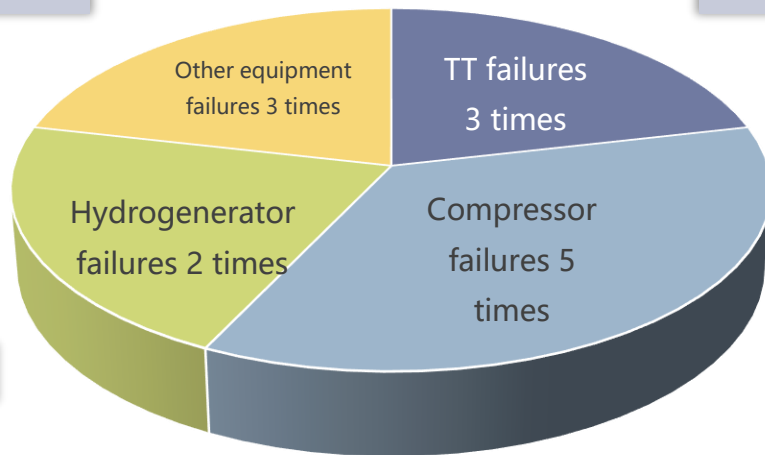
equipment

运行8个月，事件累计14次；总计影响运营时间19小时。

Running for 8 months, the event has accumulated 14 times; total impact on operating hours is 19 hours.

2 hours

No effect



No effect

17 hours



staff

➤ 加氢站人员配备情况 HRS staffing situation

站长(stationmaster): 1人 ; 站员(staff): 9人

➤ 加氢站人员持证 HRS personnel certificate

危化品主要负责人证

危化品安全管理人员证

危化品从业人员证

A3;P5;R1;R2

低压电工证

- 运行8个月，除每个员工的三级教育培训外，
其他培训共计41次。 After 8 months in operating ,
in addition to each staff tertiary education training, the

other training totaled 41 times.

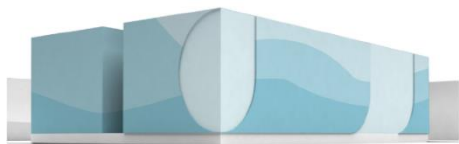


Key Points in Management



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➤ 江桥站运行的成本构成



* 基于稳定运行5个月的数据统计

Based on statistical data of stable operation for 5 months

站运营成本构成
HRS operating cost

氢气成本 H2 cost 65.2%

TT车租金 TT rental fee 5.4%

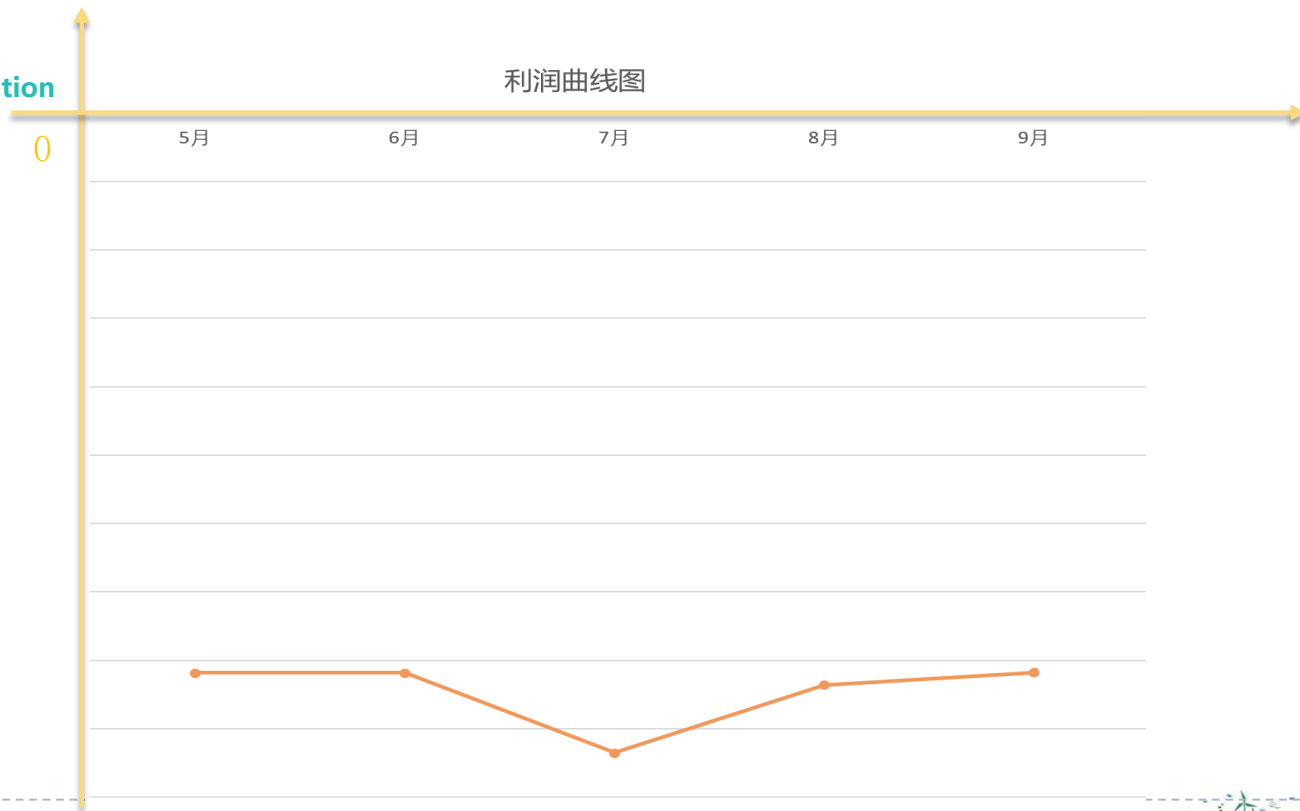
水电费 other cost 2.8%

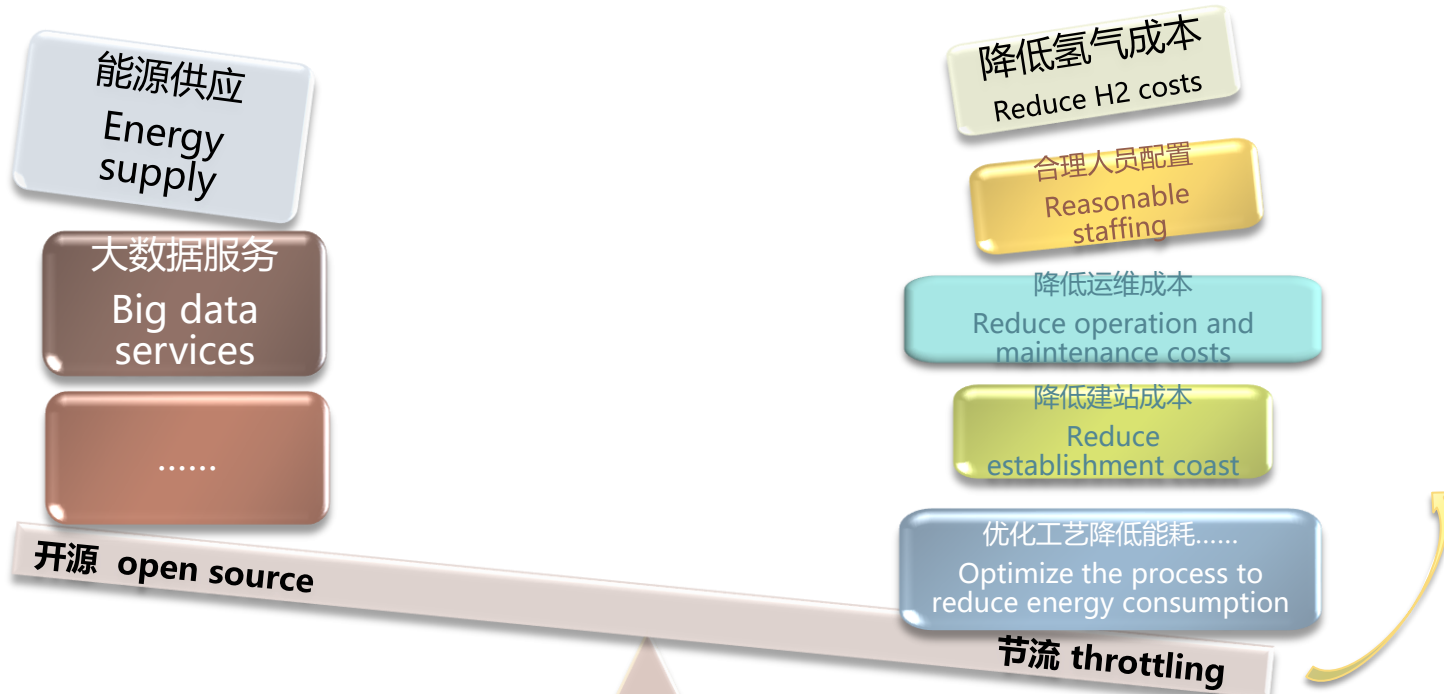
安全运维、人员工资等 Safe operation and maintenance, staff salary 13.6%

固定折旧、土地租金 Depreciation, land lease fee 13%



- 江桥站运行的利润情况
- Jiangqiao station profit situation





在成本压力远远大于能源供应收入的前期，如果有补贴，可以更好的鼓励氢基础产业的发展！

In the early stage, when the cost pressure is far greater than the energy supply income, if there are subsidies, it can better encourage the development of the hydrogen basic industry!



大屏监控应用

配合监控中心的建设，提供相应的投屏展示软件并支持操作互动，以实现从全国到某一个区域、到某一个站场、再到某一个加氢相关设备的精细聚焦监控。



全国运营地图

以地图的方式展示区域、站场的运营数据、运营状态

设备监控地图

监控所有设备的运营状态，包括加氢、故障等

站场监控图

展示所选站点的加氢运营、客户消费、收入、故障等情况

加氢监控图

展示某个特定加氢桩的运营、客户消费情况及当前状态、历史数据/收入/故障等

客户活跃图

一个时间段内客户注册、加氢、充值等数据图表的展示



Large screen monitoring application

With the construction of the monitoring center and provide the corresponding screen display software investment and support interactive operations, in order to achieve from a national to a regional, certain station, and the focus on the hydrogenation related equipment.



National
operation
map

以地图的方式
展示区域、站
场的运营数据、
运营状态

Equipment
monitoring
map

监控所有设
备的运营状
态, 包括加
氢、故障等

Station
monitoring
map

展示所选站点
的加氢运营、客户
消费、收入、故
障等情况

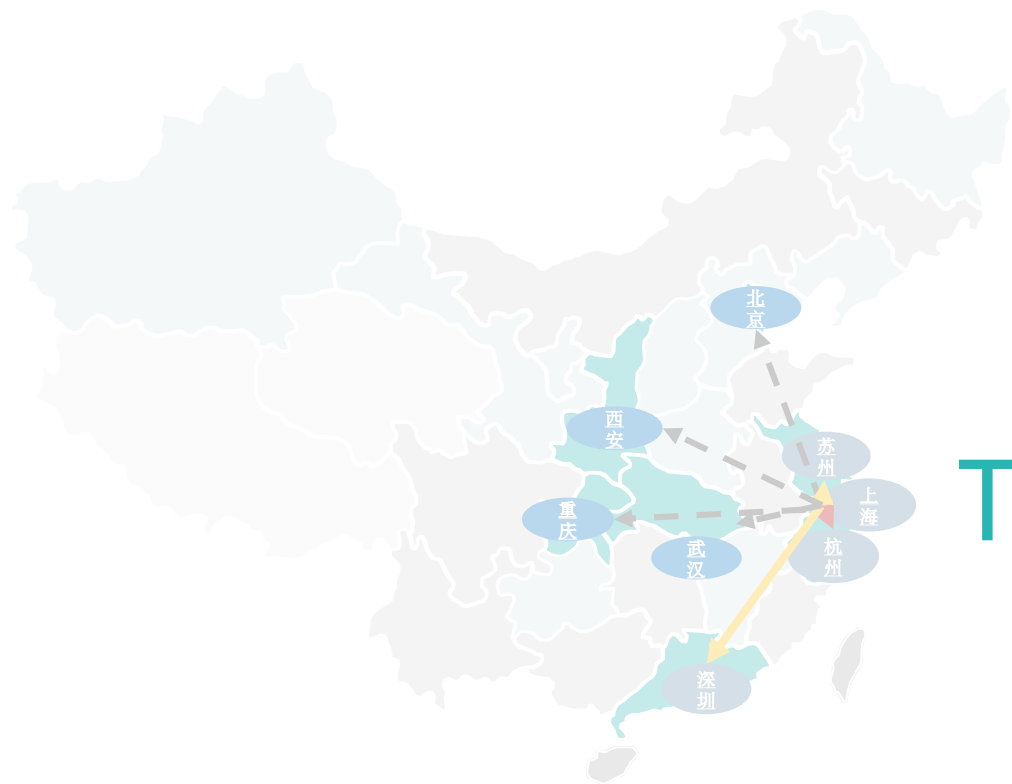
Hydrogenation
monitoring
chart

展示某个特定加氢桩
的运营、客户消费情
况及当前状态、历史
数据/收入/故障等

Customer
activity
map

一个时间段内
客户注册、加
氢、充值等数
据图表的展示





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THANK YOU

Create a Green Future

构建绿色未来

