



THE STATE OF THE ART TECHNOLOGY PARKING GUIDANCE SYSTEM



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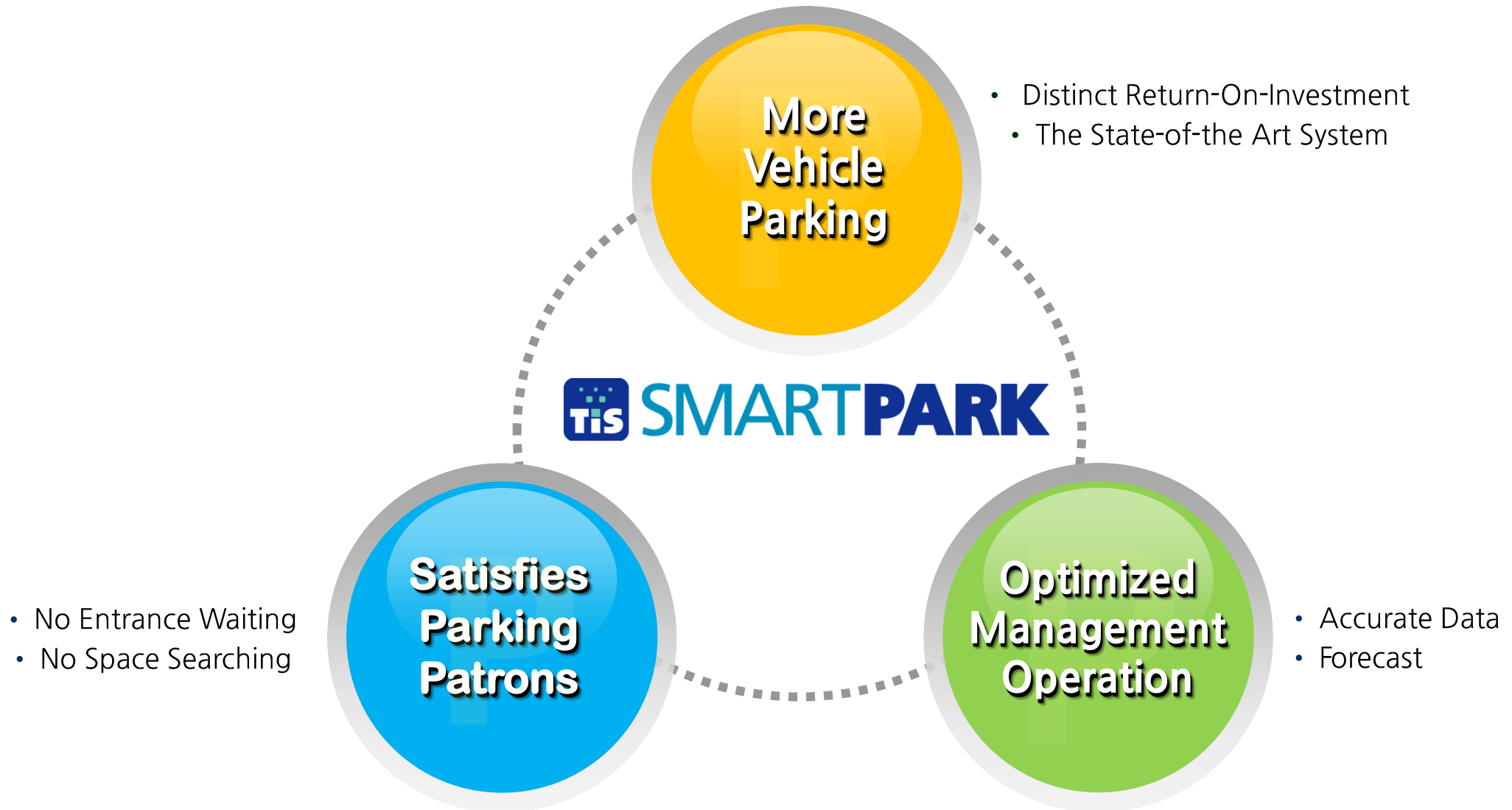
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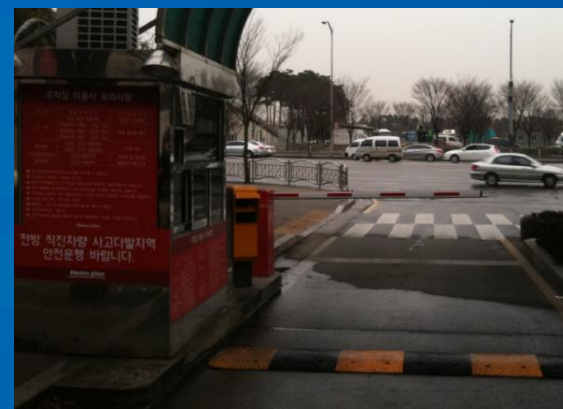
I . What's SMARTPARK?



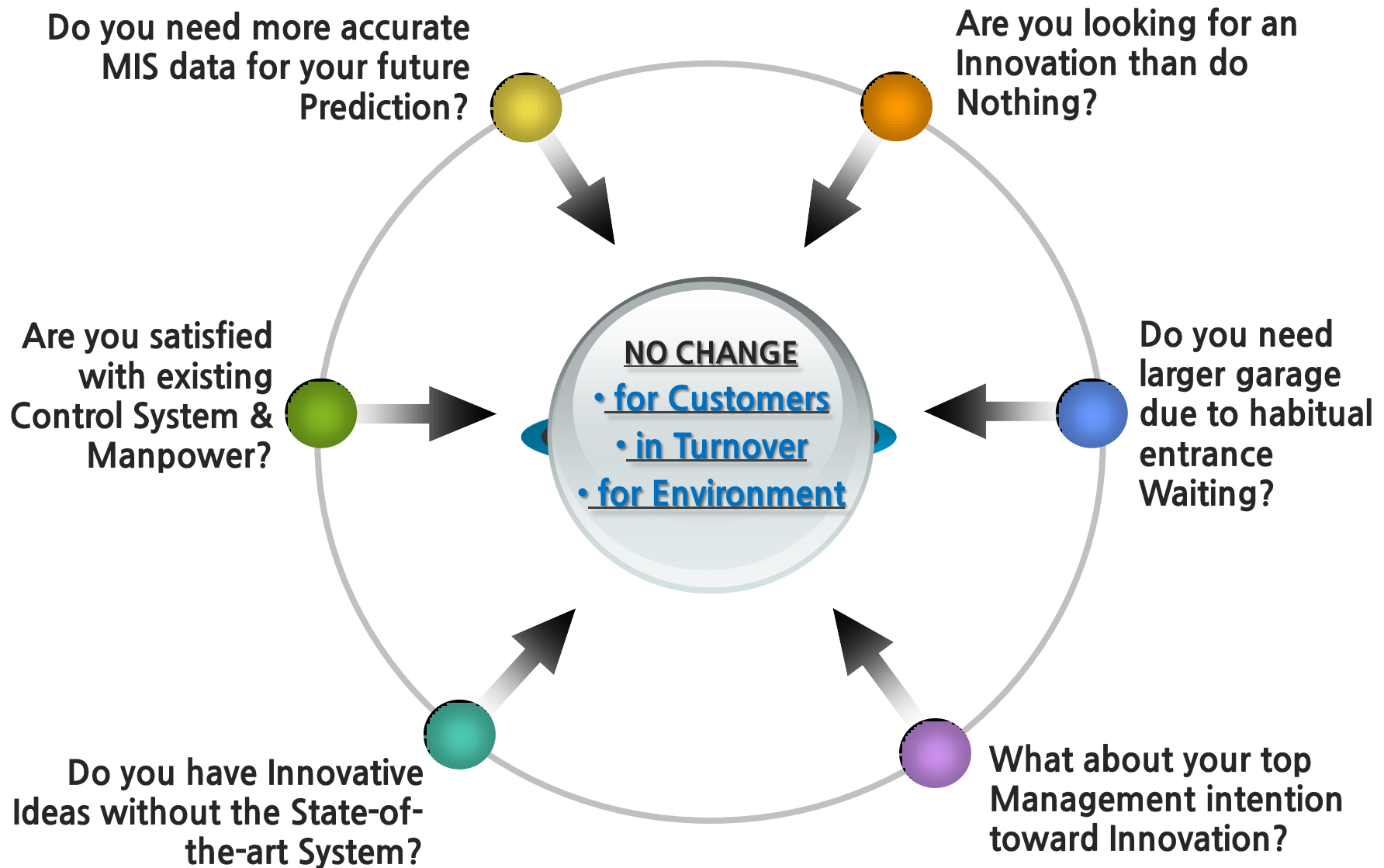
What's SMARTPARK?



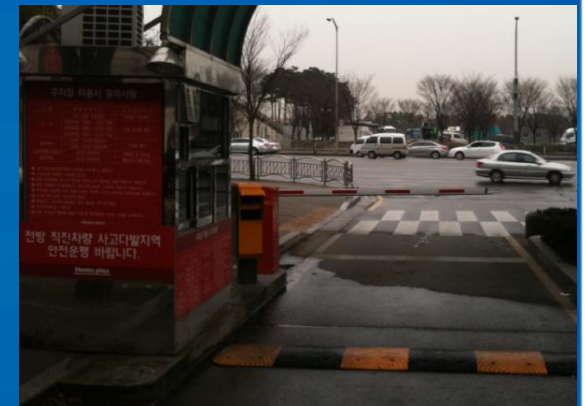
II . Current Situation



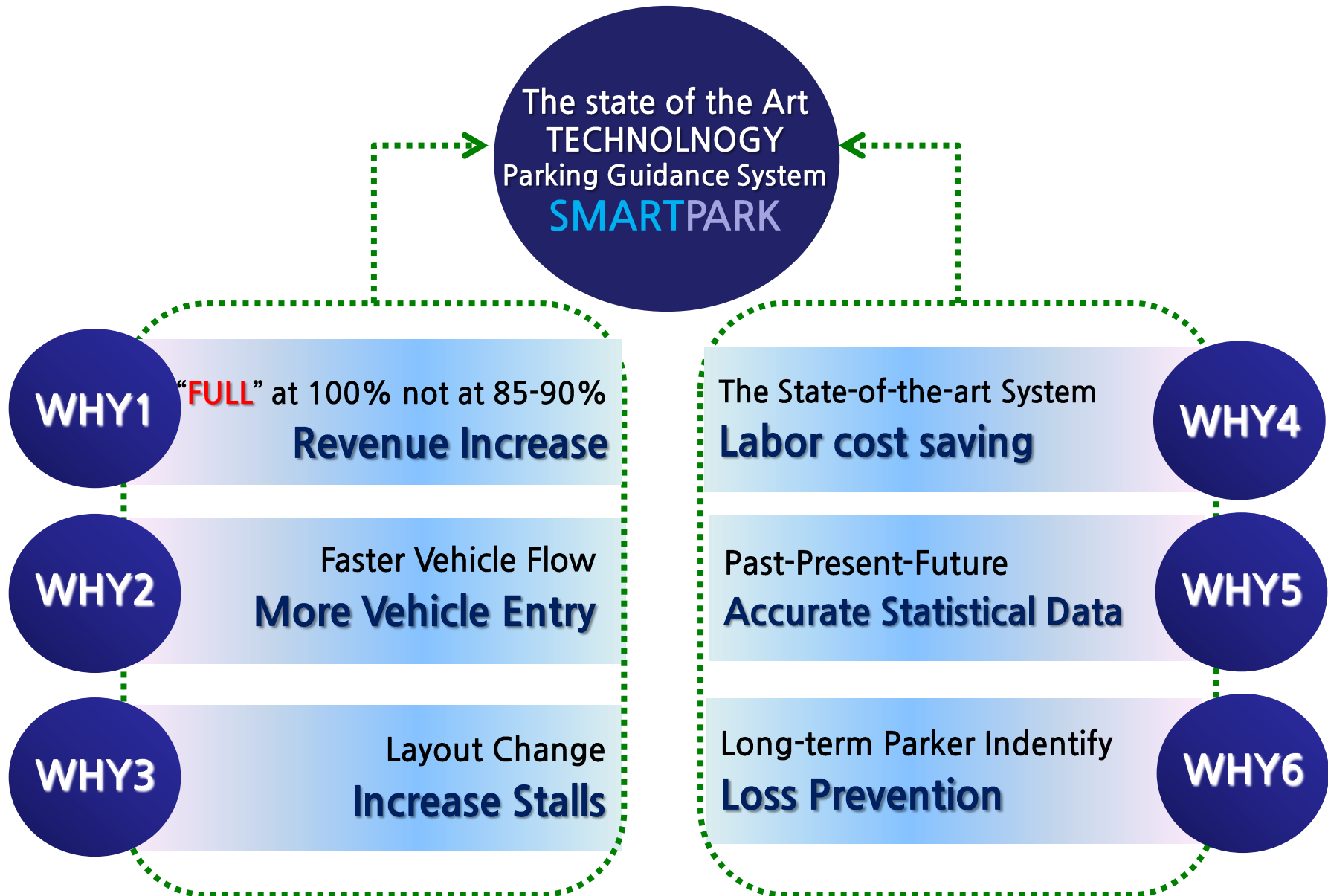
Current Situation



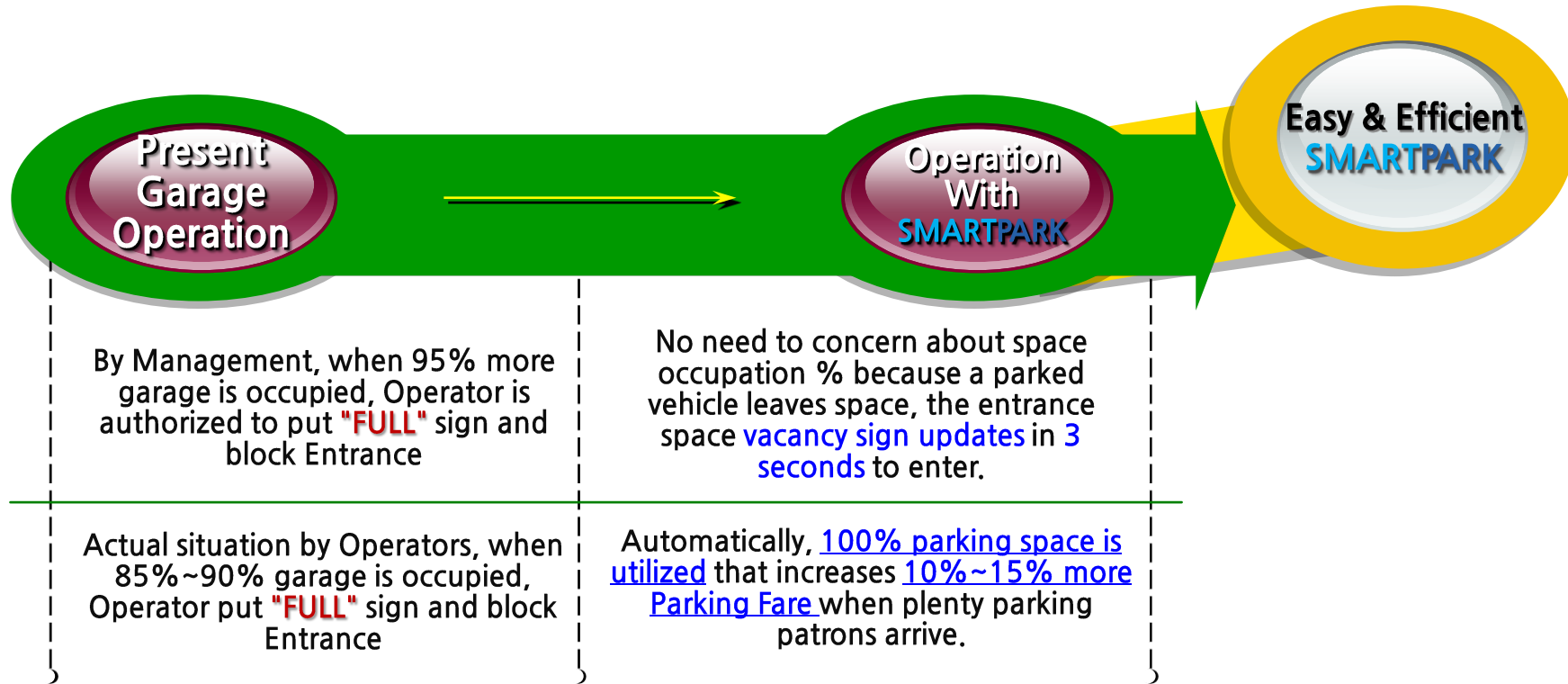
III. Why SMARTPARK?



Why SMARTPARK?



Why 1. "FULL" at 100% not at 85~90% Revenue Increase

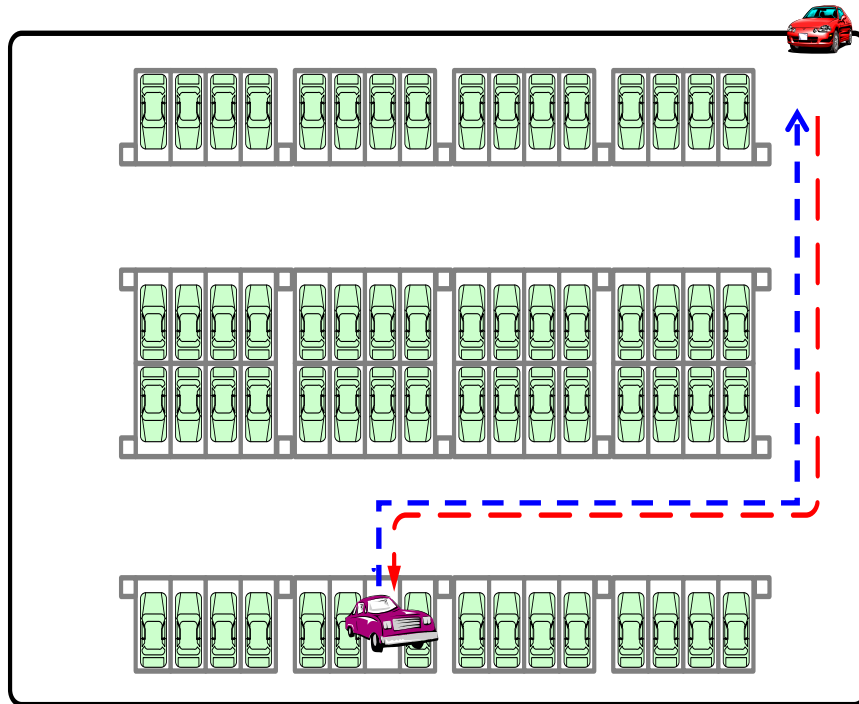


Additional Revenue/Year (\$7.00/hr; 4-hr/day; 300 days/yr)

Garage stall	5%	10%	15%	5%	10%	15%
3,000	150	300	450	\$1,260,000	\$ 2,520,00	\$ 3,780,000
5,000	250	500	750	\$ 2,100,000	\$ 4,200,000	\$ 6,300,00
10,000	500	1,000	1,500	\$ 4,200,000	\$ 8,400,000	\$ 12,600,000

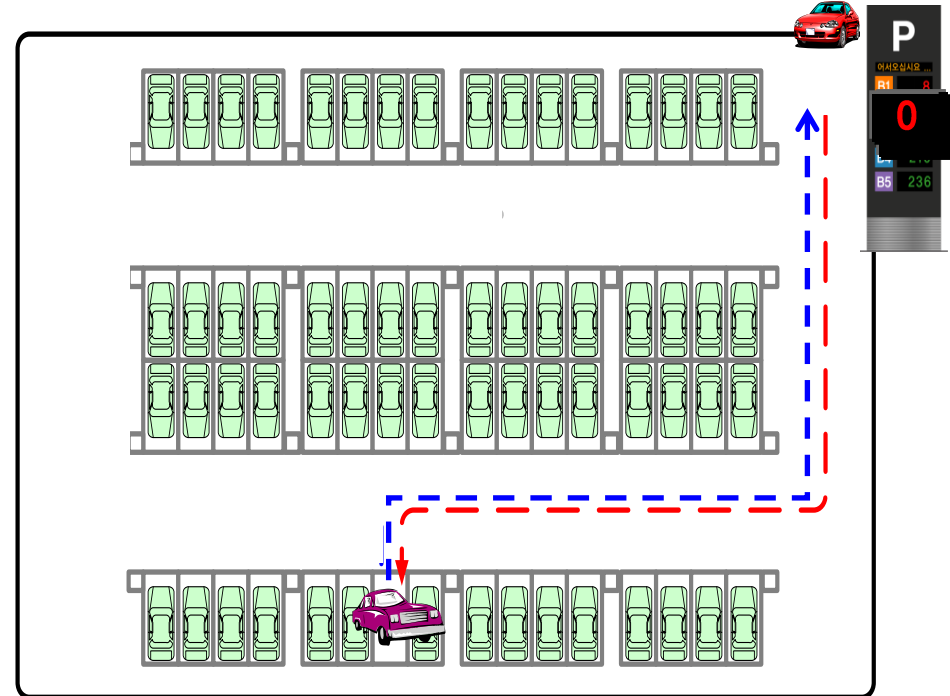
Why 2. Faster Vehicle Flow More Vehicle Entry

Before



At "**FULL**", Vehicle can enter only when parked vehicle arrives at EXIT Gate

After SMARTPARK



At "**FULL**", Vehicle enters as soon as parked vehicle leaves the **STALL**

Why 2. Faster Vehicle Flow More Vehicle Entry

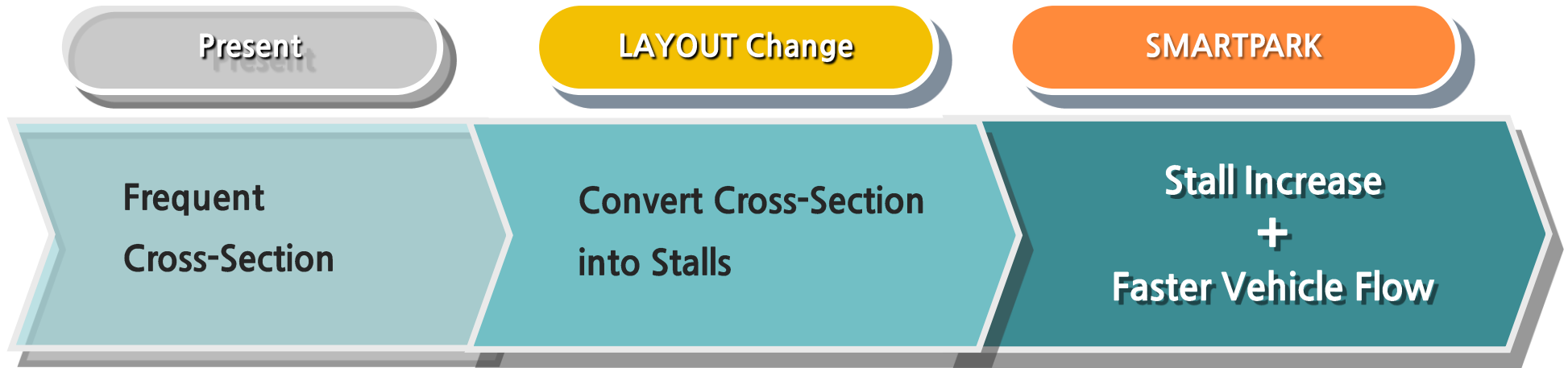
Garage Stalls	Peak Time # of EXIT (veh/min)	Exit gate arrival(min)	Additional entry while exiting (# veh.)	Entrance Queue Line Reduction (Km/hr)	Additional Entering(# veh/hr)
600	6.7	3	20	3.2	400
700	7.8	4	31	3.7	467
800	8.9	5	44	4.3	533
900	10.0	6	60	4.8	600
1,000	11.1	7	78	5.3	667
1,200	13.3	8	107	6.4	800
1,500	16.7	9	150	8.0	1,000
2,000	22.2	10	222	10.7	1,333
2,500	27.8	10	278	13.3	1,667



→ **Waiting Queue Line Disappear**

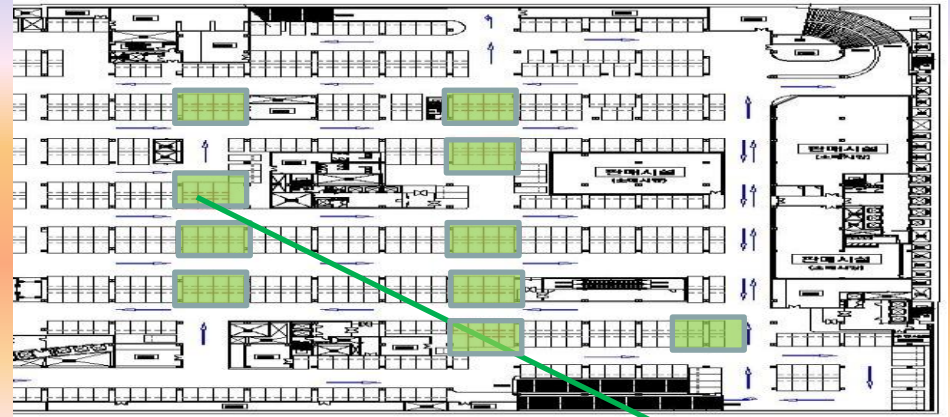
The above factor varies depending on Garage condition.

Why 3. Layout Change Increase Stalls



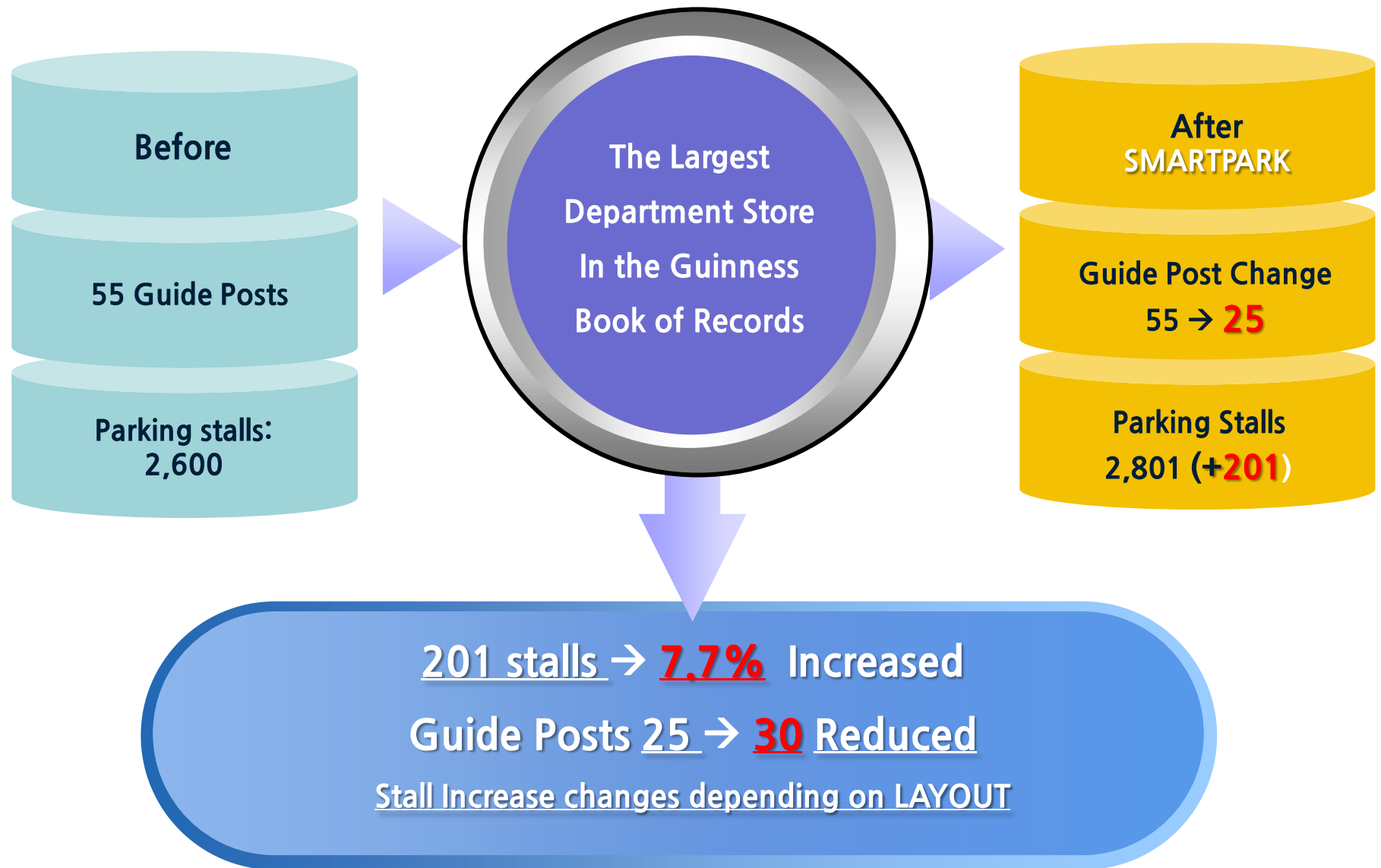
“Design Stage” Consulting calls for more stall increase

Between 2-8%
with the same Garage Space

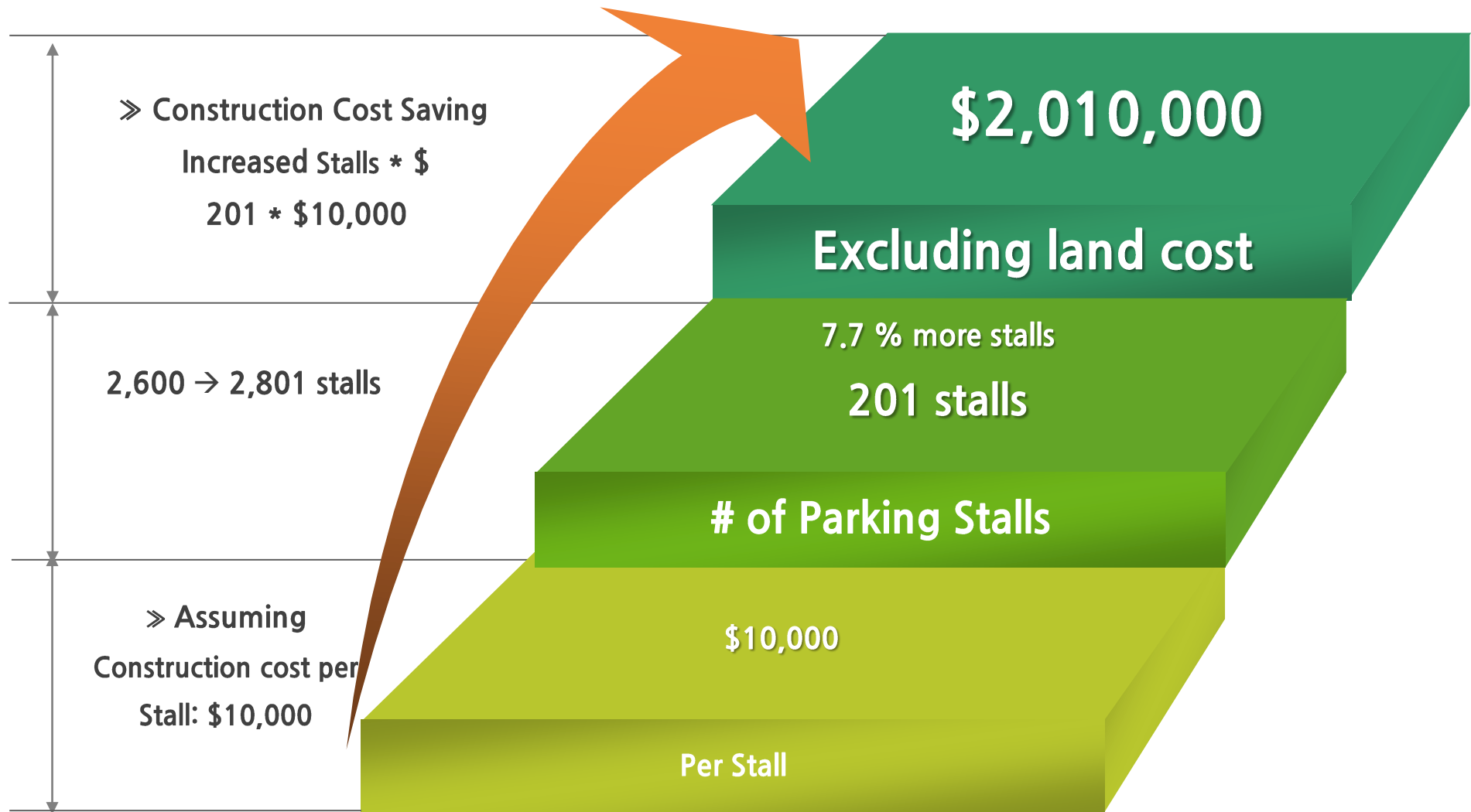


Cross-Section is converted to Parking Stalls

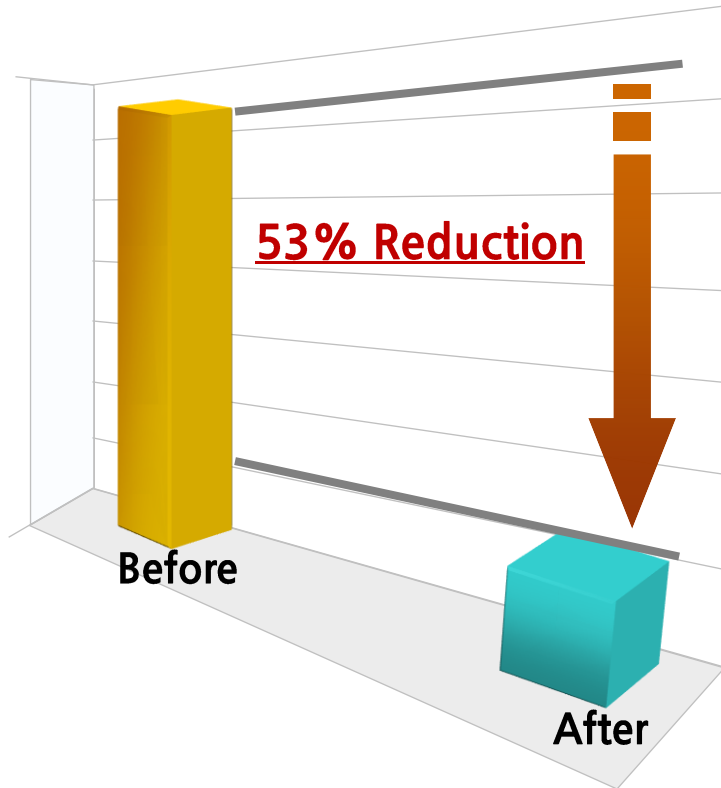
Why 3. Stalls Increase Stalls - Shinsegye Busan Case



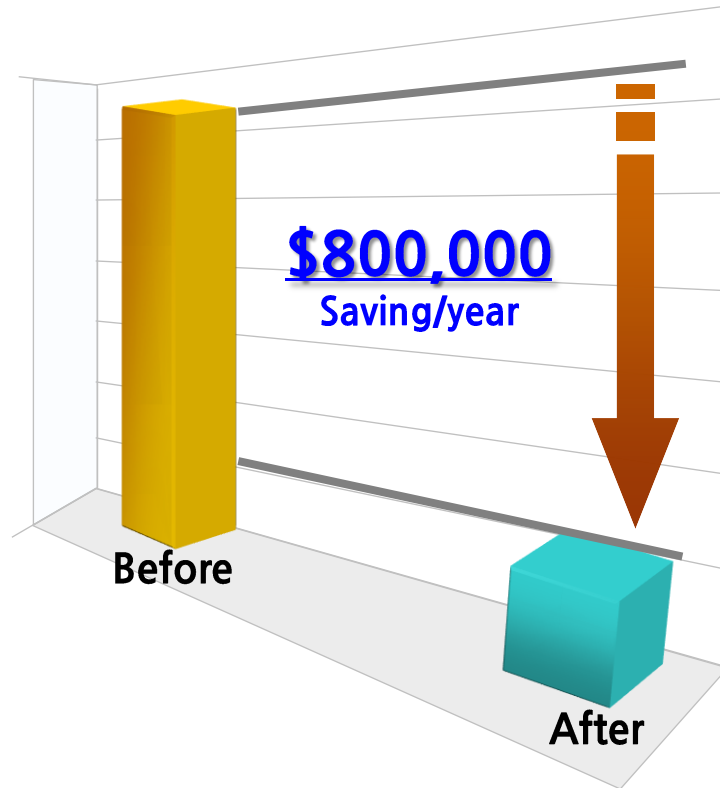
Why 3. Actual Benefit – Shinsegye Busan Case



Why 4. Labor Cost Reduction – Shinsegye Busan Case



of Employees



Labor cost

After opening (2009. Mar~June): **More employees reduced than expected**

Why 5. Past-Present-Future Prediction Accurate Statistical Data : K-Store

Long-term parking vehicles & Space occupation case

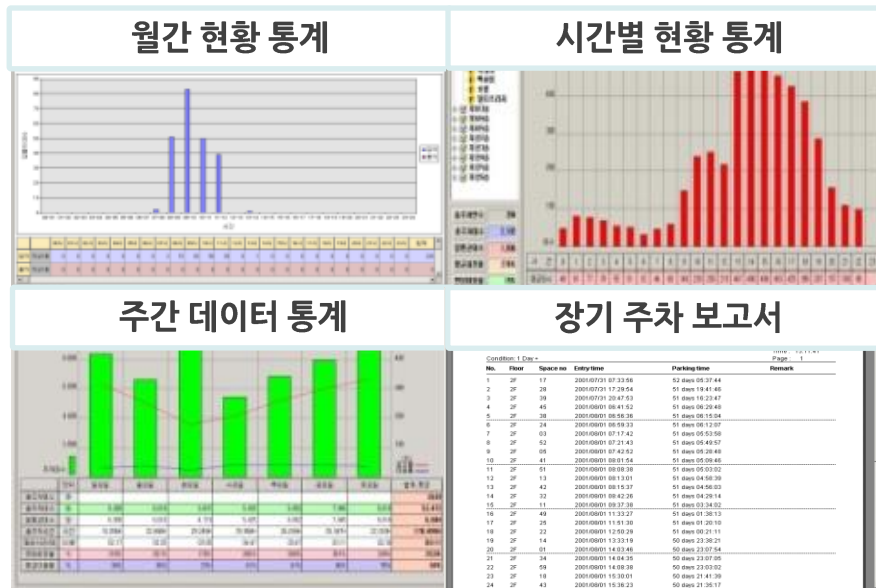
- ▶ **Total stalls: 393**
- ▶ **Operation Hrs: 15 hrs**
- ▶ **Long-term parking definition**
 - 85% more stalls are occupied
 - 4 hr more hrs parked vehicles

- ▶ **Estimated**
 - 1,673 (veh./wk)
 - 86,996 (veh./yr)

Description	Weekly average	Description	Weekly average
# of veh entered (#/day)	2,916	Total capacity (Space-hr)	5,520
Long-term Parker's vehicle (#/day)	239	Long-term parker occupation (Space-hr)	2,470
Long-term parking rate(%)	8.2%	Long-term Parker's occupation (Space-hr %)	44.7%
Forecasted Long-term parkers per year	86,996	SMARTPARK	

Why 6. MIS Data Parking Management - Loss Prevention

- ▶ **Real Time Monitoring**
- ▶ **Daily-Wkly-Monthly-Annual Data Output**
- ▶ **Long-term Parking Data** - More Revenue
- ▶ **SMARTPARK**- Revenue Control Connection:
Cross Check - Revenue Leakage **Protection**



IV. Difference



Difference

Q QUALITY

- ▶ World Best 10years know-How
- ▶ Patents in 18 countries
- ▶ Safe quality through multiple test

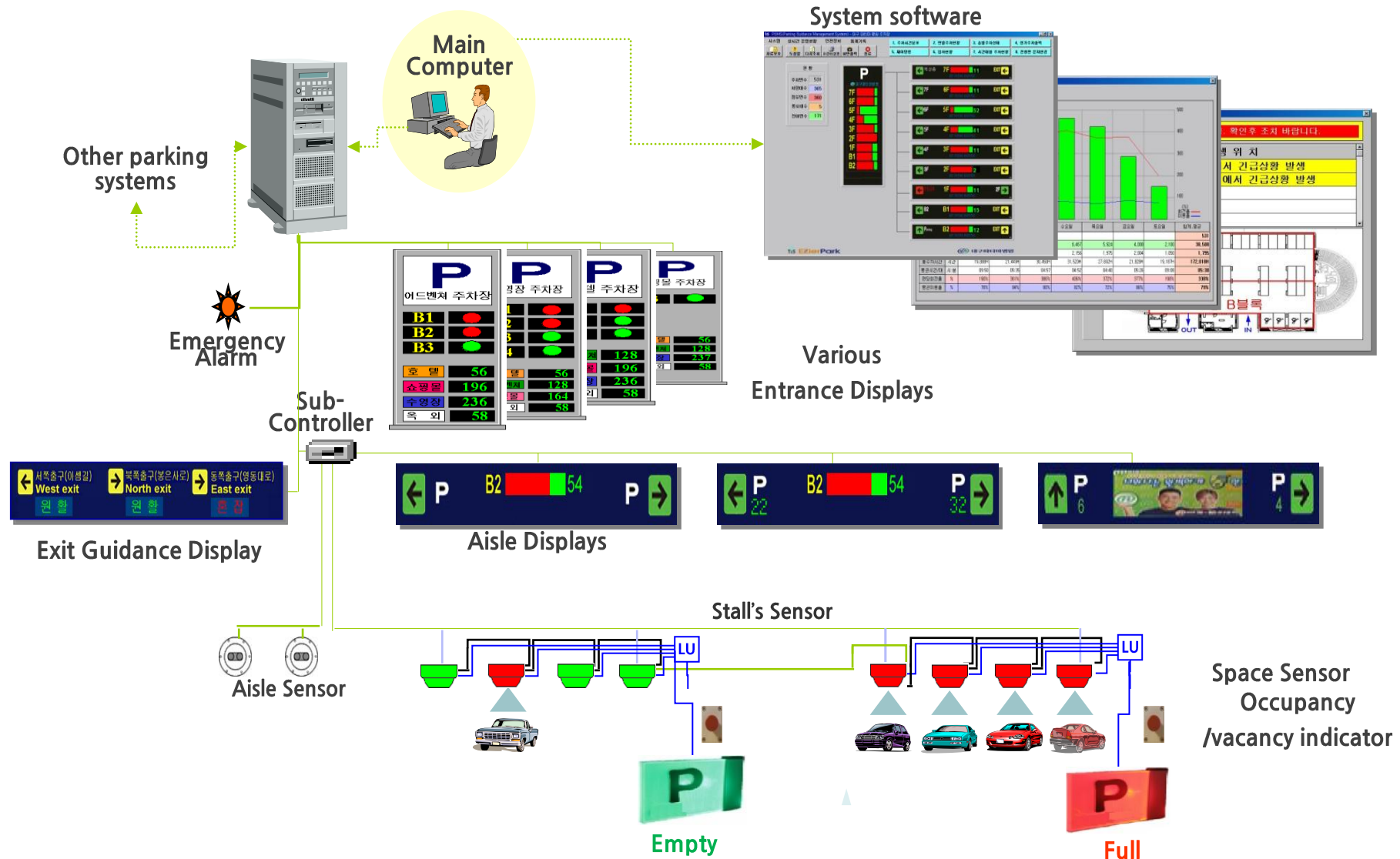
S SERVICE

- ▶ Remote trouble shooting and repair & speedy A/S
- ▶ Long-term Survey→ understand customer's need
- ▶ Layout specialist→ Consultation for additional parking space
- ▶ After Installation→ Provide expected profit analysis

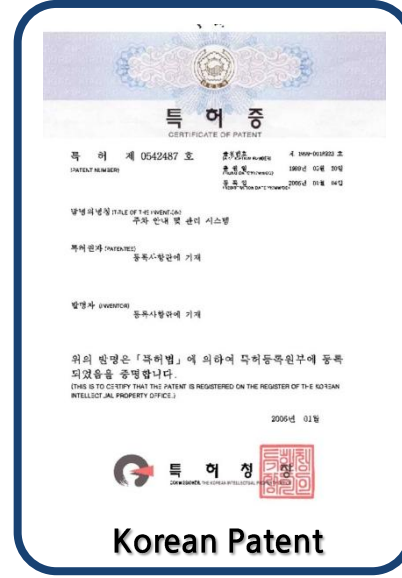
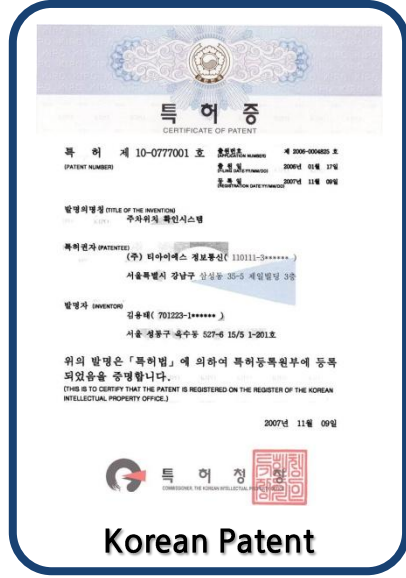
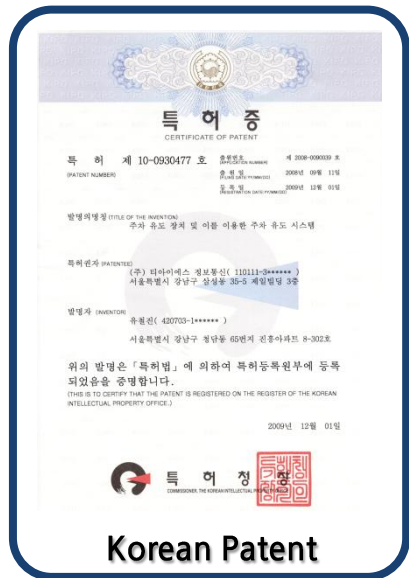
C CLEAN

- ▶ 360°luminous Sensor→ efficient parking space
- ▶ Parking position, Voice messaging system for handicapped
- ▶ All the parts LED use : eco-friendly system
- ▶ Parking lot : LED light→ low CO₂ **Green Energy**

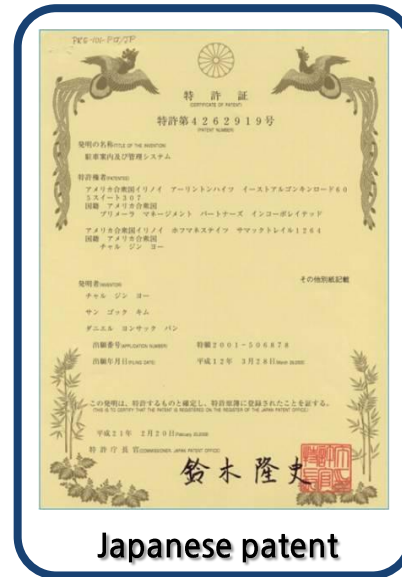
The Difference : Parking Guidance & MIS



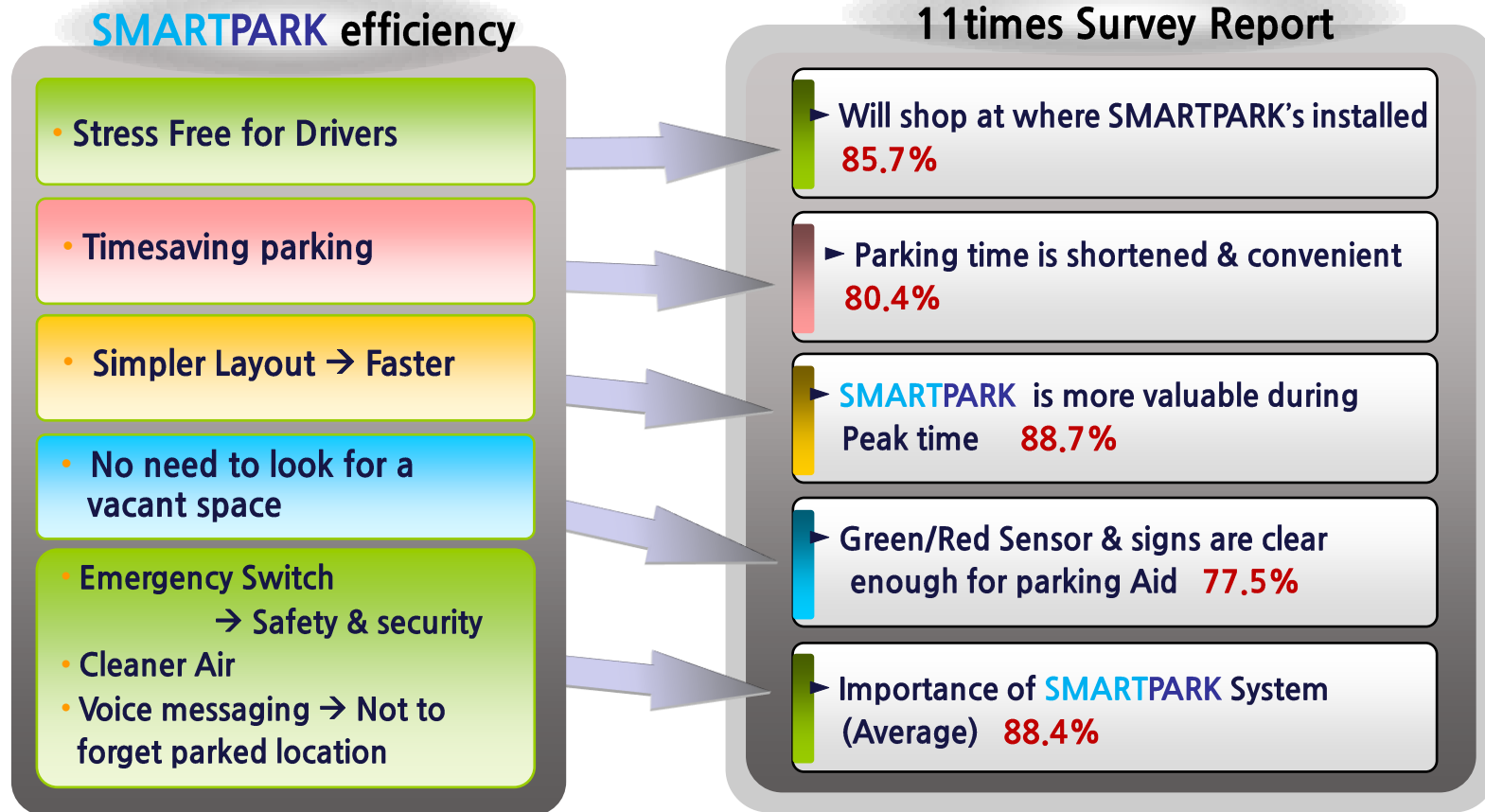
The Difference : Patent-Certificate of Technology



- ▶ Content's
Sensor & Camera(LPR)
Or combined method
- ▶ TIS technology
 - R&D & Engineering
 - Program : R&D & Micro Processing Technology



The Difference : Survey Result



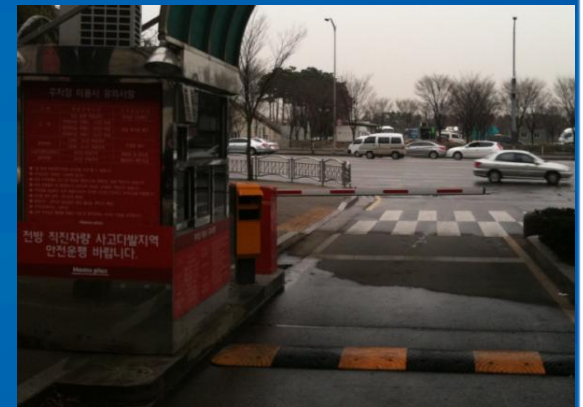
21C Parking Guidance Automation

→ Now Necessary System not optional!!!

TIS Value → Customer's needs through survey analysis

+ experienced and accumulated **KNOW-HOW**

V. Reference

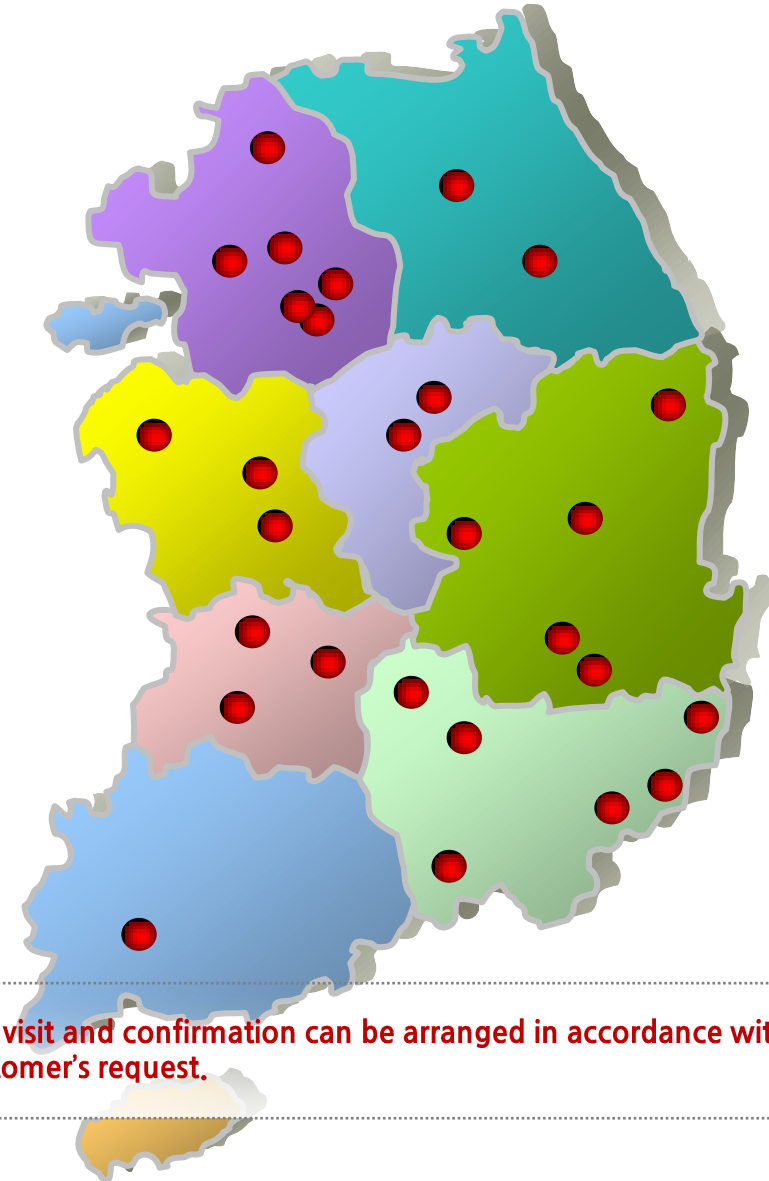


Reference

Reference Sites

- ▶ Department stores 7
- ▶ Discount store 31
- ▶ Hospital 6
- ▶ Building complex 4
- ▶ ECT 6

Total : 54 parking Facilities



Site visit and confirmation can be arranged in accordance with customer's request.

Reference : Experiences



Sinseigue Centurm

scale	2,801space
period	2008.06 ~ 2008.12



Ku's Starcity

scale	2,252space
period	2008.10 ~ 2008.12



Home Plus Eujeonbu

scale	1,300space
period	2008.09 ~ 2008.10



Home Plus Dongsuwon

scale	1,200space
period	2008.07 ~ 2008.08



Changwon Convention Center

scale	3,254space
period	2008.03 ~ 2008.10



Seoul Samsung Medical Center

scale	1,415space
period	2007.07 ~ 2007.10



Ku's Neungdong-Ro

scale	1,450space
period	2009.04 ~ 2009.06



Ku's Lotte

scale	1,651space
period	2008.08 ~ 2008.10



Home Plus Daegu Seongseo

scale	1,200space
period	2008.08 ~ 2008.09



Home Plus Ansan

scale	1,200space
period	2008.07 ~ 2008.08



Yeonse Medical Center

scale	2,204space
period	2007.12 ~ 2008.03



Home Plus Jamsil

scale	1,393space
period	2007.08 ~ 2007.09

Reference : Experiences



Home Plus Jakjeon

scale	1,500space
period	2007.03 ~ 2007.04



Home Plus YeongdeungPo

scale	2,035space
period	2006.12 ~ 2007.02



Home Plus Dongrae

scale	1,551space
period	2006.10 ~ 2006.12



StarCity

scale	3,065space
period	2006.07 ~ 2006.12



Seoul Asan Medical Center

scale	2,110space
period	2006.07 ~ 2006.10



Busan Catholic Hospital

scale	1,315space
period	2006.07 ~ 2006.10



Home Plus Suwon Yeongtong

scale	1,799space
period	2005.03 ~ 2005.06



Yeonse Medical Center

scale	2,332space
period	2004.12 ~ 2005.05



Home Plus Seobusan

scale	1,672space
period	2004.07 ~ 2004.10



Lotte Ulsan

scale	3,334space
period	2001.12 ~ 2002.02



COEX Trade Center

scale	4,138space
period	2001.07 ~ 2002.01



Daegu Patima

scale	1,538space
period	2000.12 ~ 2001.02

