

Forget the Levels, Focus on the Business

4 Secrets of Successful Improvement

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HUMAX Co., Ltd.

Overview of Presentation

Goal of This Presentation

To share **Process Improvement Experiences** based on **Business Context** not CMMI models

Brief Summary of This Presentation

From 6 years of my personal experiences, I realized **4 Secrets of Successful Improvement**. I'll explain each of them and show a **Real Case Study**.

Contents of This Presentation

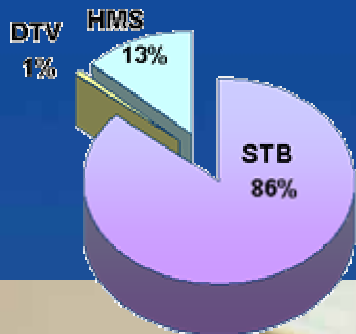
Part I Background Information	(05 min)
Part II 4 Secrets of Successful Improvement	(15 min)
Part III Case Study (Defect Tracking Process)	(20 min)

Part I

Background Information

Brief Overview of HUMAX

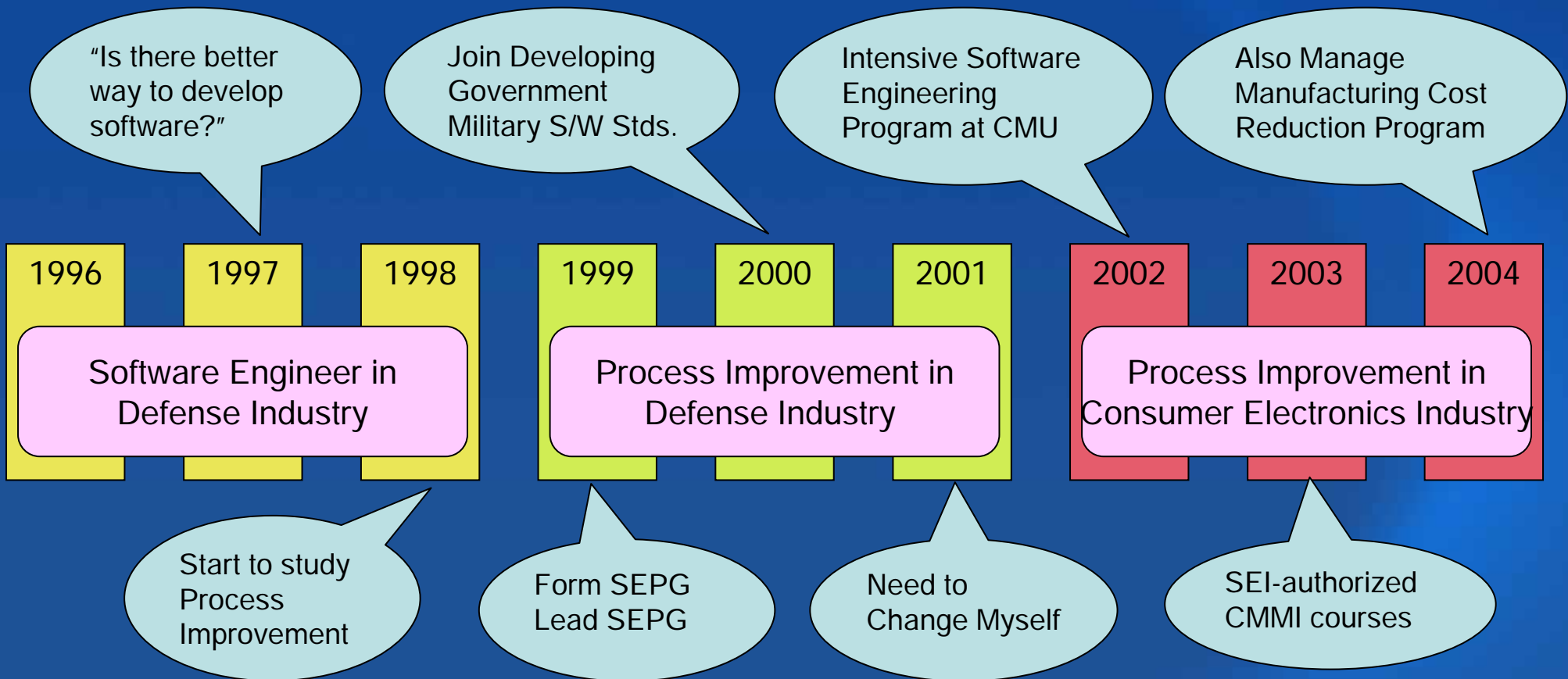
Founded in 1989 First DVB STB Maker in Asia in 1996 Listed KOSDAQ in 1997 \$450M revenue in 2004 \$1,000M revenue by 2006



In 1996 HUMAX was the first company in Asia to develop the European-standard DVB digital satellite STB. Since then, with an array of high-quality CAS-embedded STBs, HUMAX has stood shoulder to shoulder with CE giants such as Philips, SONY, and Thomson and has been leading the digital broadcasting industry. The world's most versatile STB-related products—satellite, cable and terrestrial STB, along with IP STB, PVR, and DVD-STB Combo are at the very heart of HUMAX technology. All the new innovations made possible by evolution in STB technology—including STB-embedded Digital TV, DVD Recorder, HTIB, and Home Media Server—pay homage to HUMAX's ongoing technological advancements.



Brief Overview of Myself



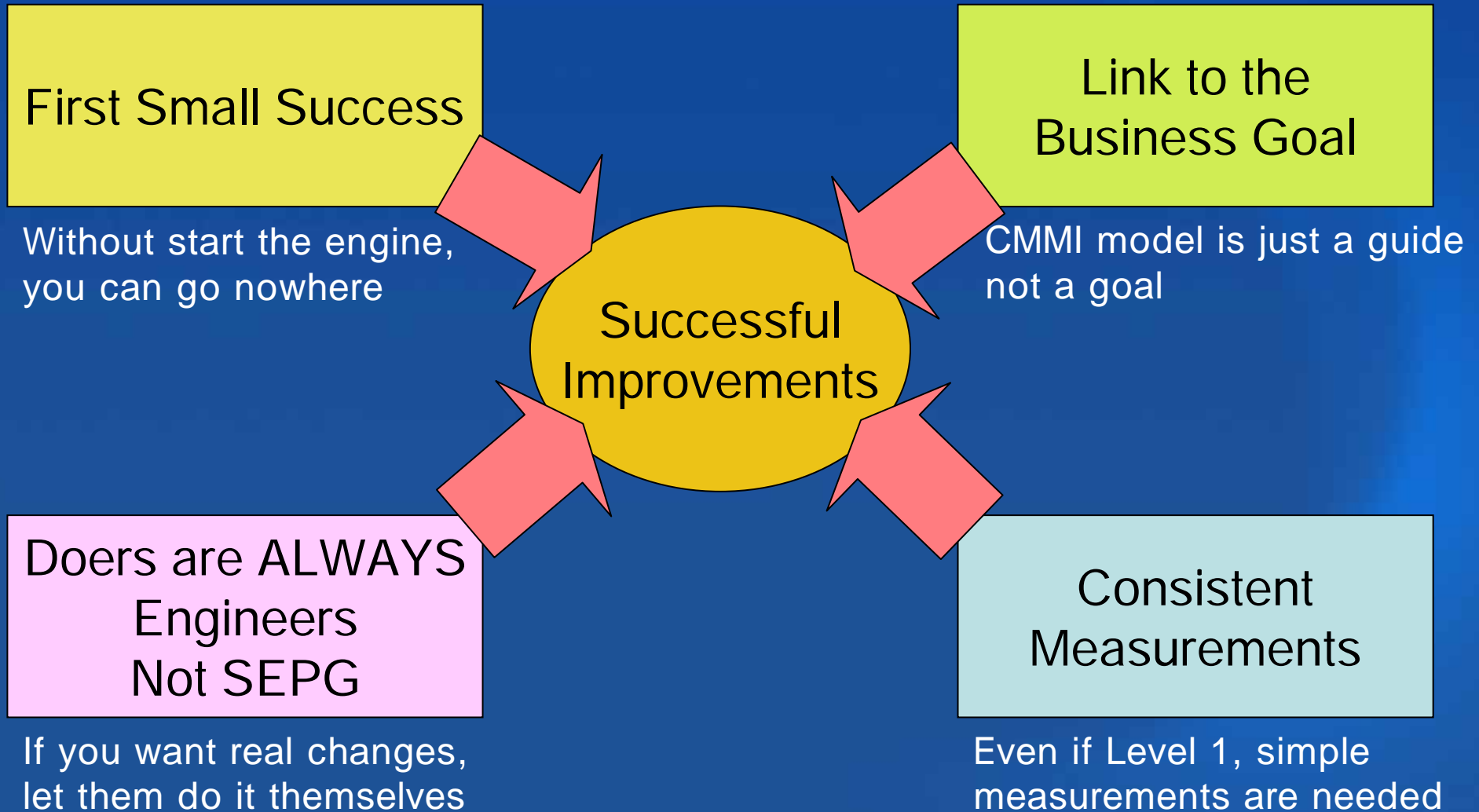
email: dhjo@humaxdigital.com

home: <http://homepage.mac.com/dhjo>

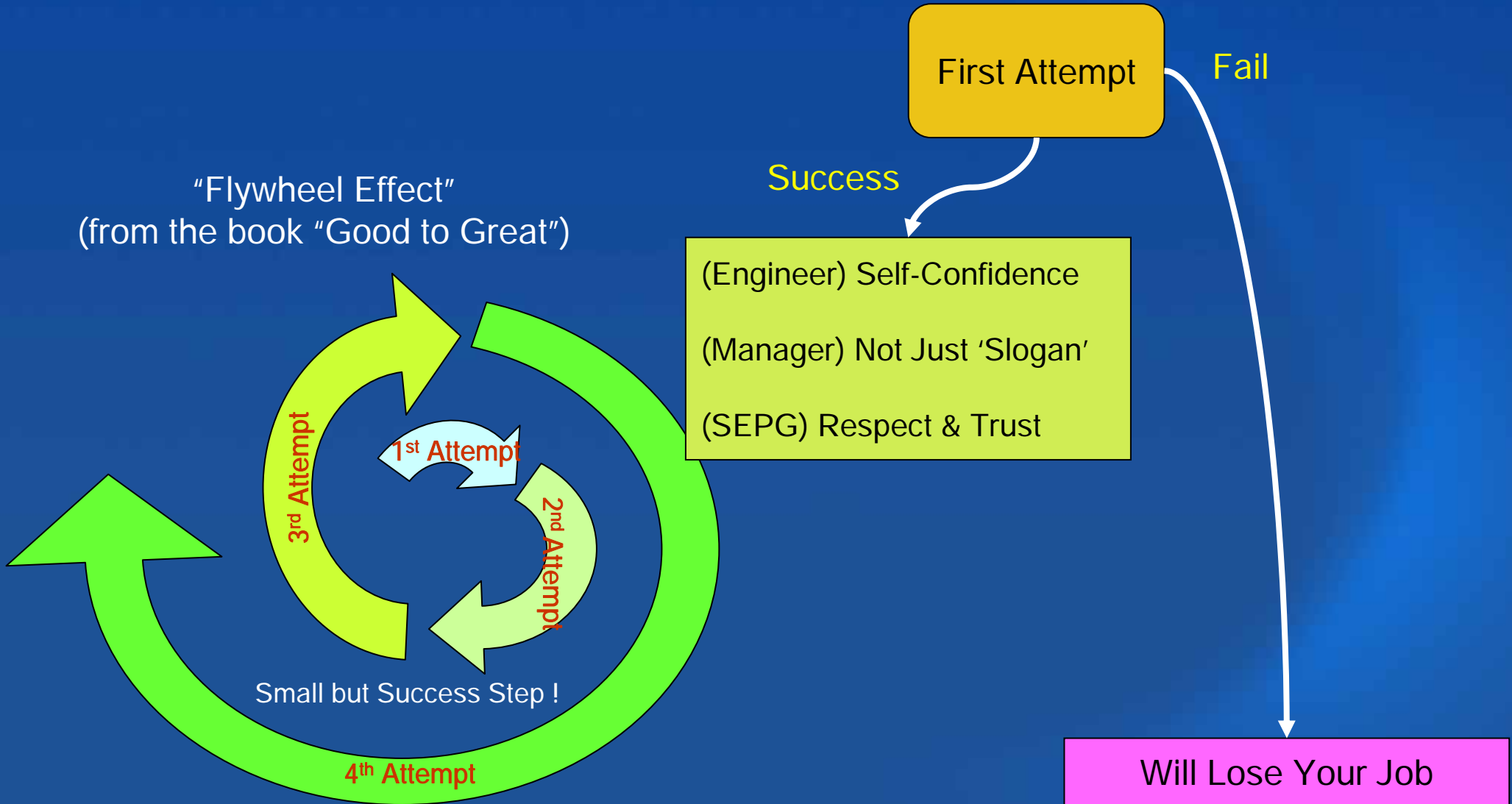
Part II

4 Secrets of Successful Improvement

4 Secrets of Successful Improvements

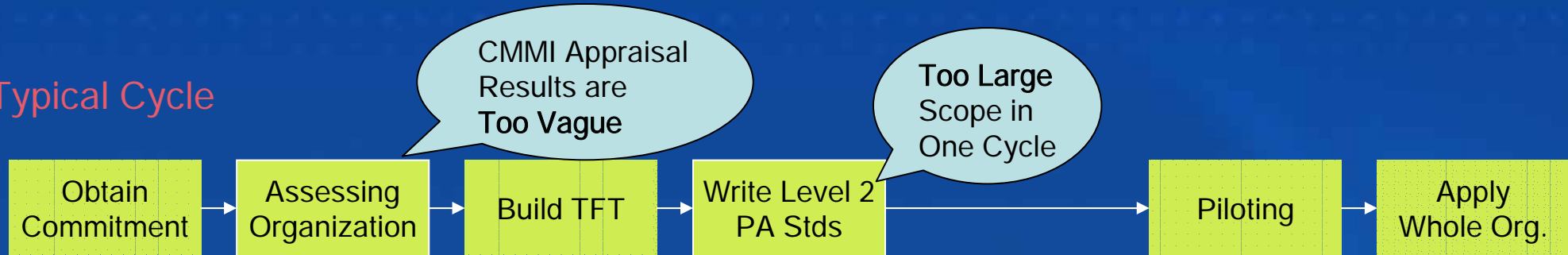


First Small Success



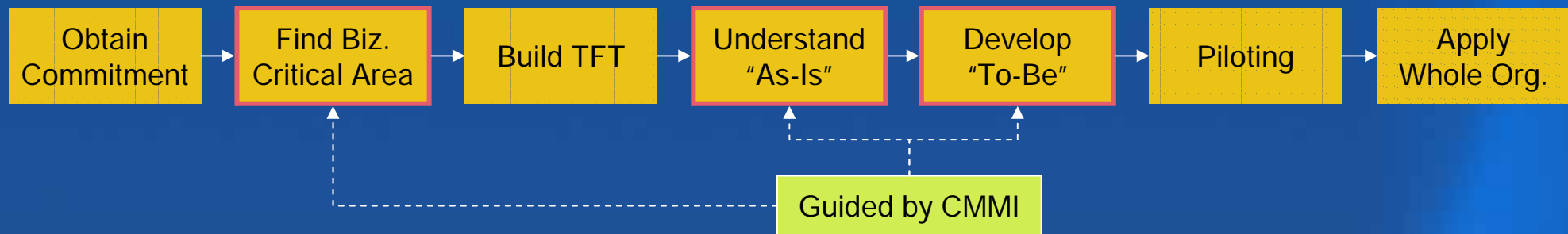
Link to the Business Goal

Typical Cycle



My Cycle

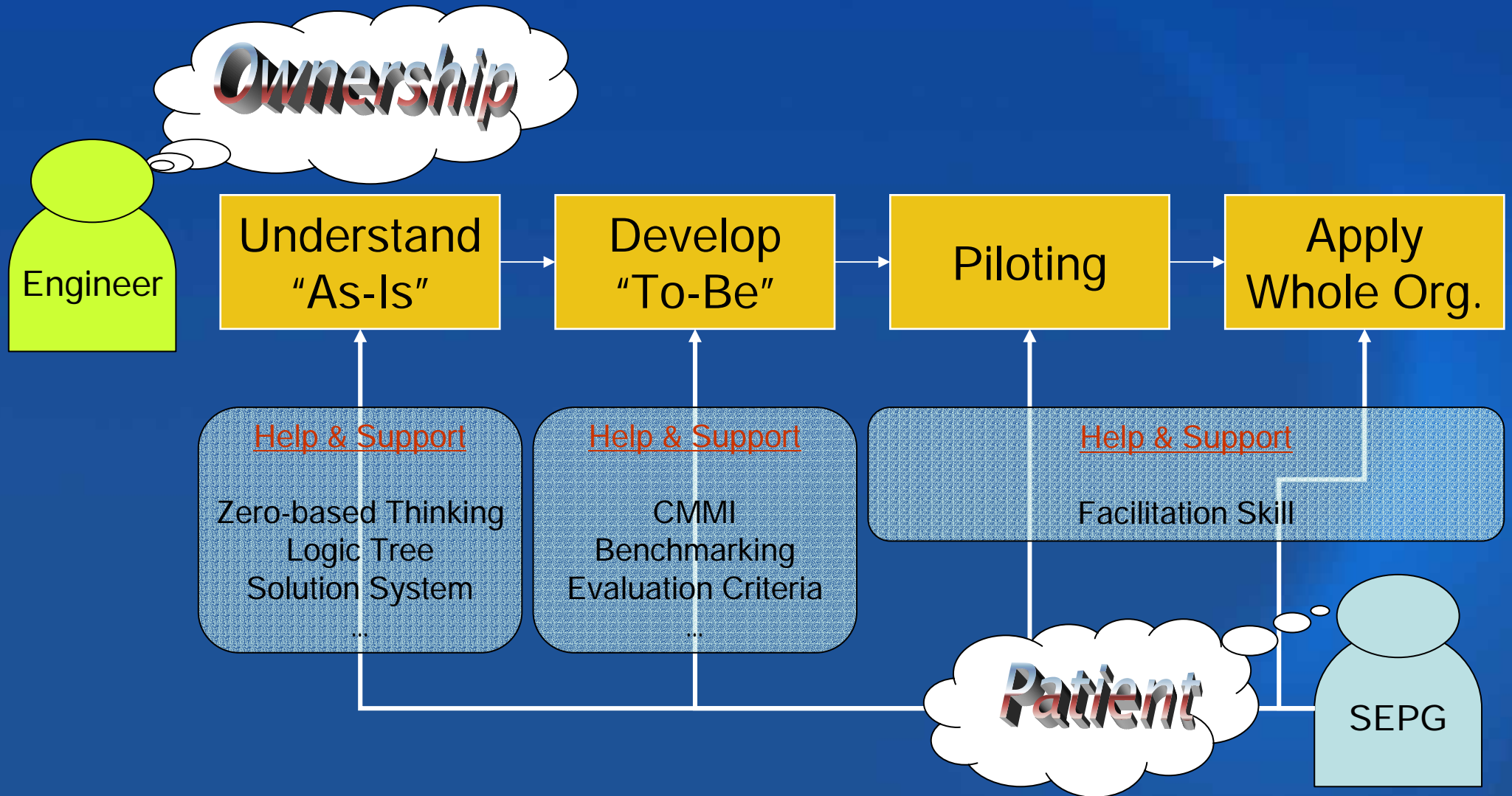
TFT: Task Force Team



**"If you start to move your car, you can go anywhere.
If you don't start, you can go nowhere"**

**Use CMMI continuous representation for Non-CMMI Process Area:
Specific goals, Specific practices, Generic practices 2.1 ~ 2.10**

Doers are ALWAYS Engineers



Consistent Measurements

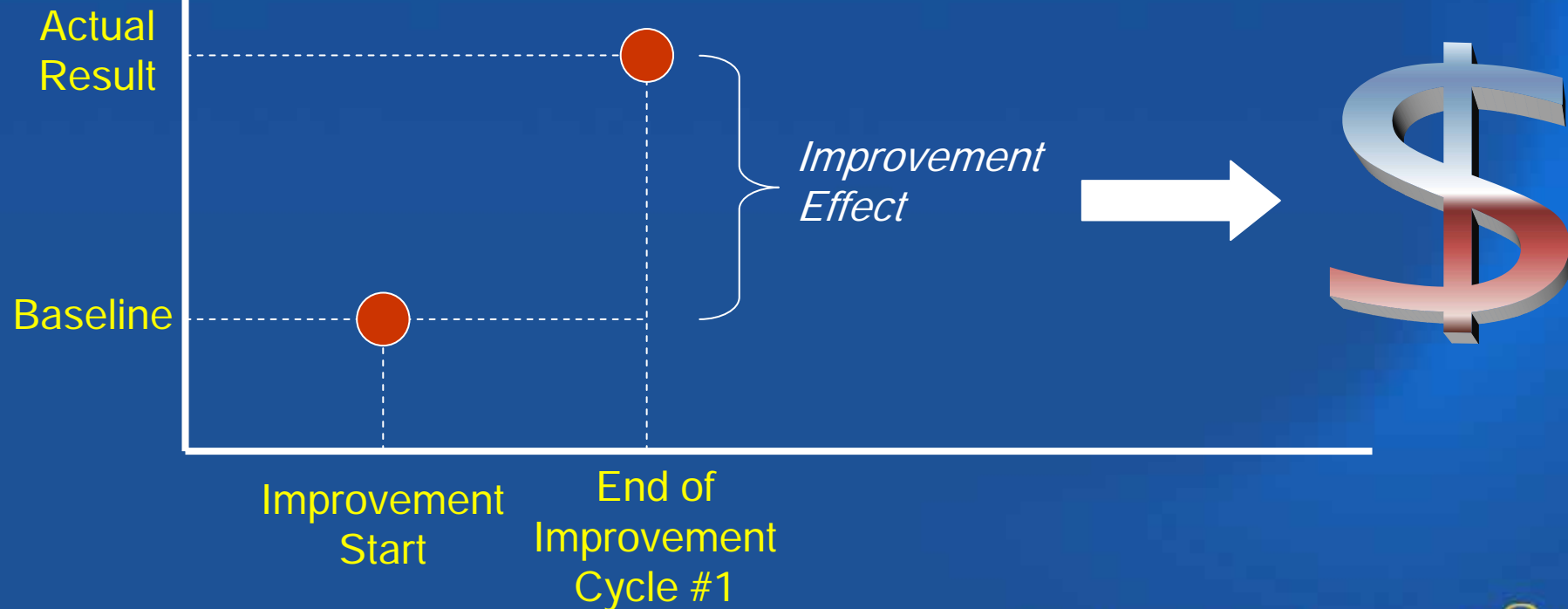
Basic Measures

(EX) Project Measures

Total and Deviation of
<Schedule, Effort, Size>
<Post Release Defect>

Objectives of Measurement

1. Guidance
2. Justification



Part III

Case Study

<Defect Tracking Process>

Startup Information

Mid 2001, HUMAX

Internal Force

"We need more systematic approaches"
(we are not anymore venture)

External Force

"We have very critical project for big market"
(about half of total revenue)

Need to **do something** to satisfy two forces

Development Environment

Engineers were too tired of traveling all the time

2 years !!!

Location

Seoul

Foreign Cities



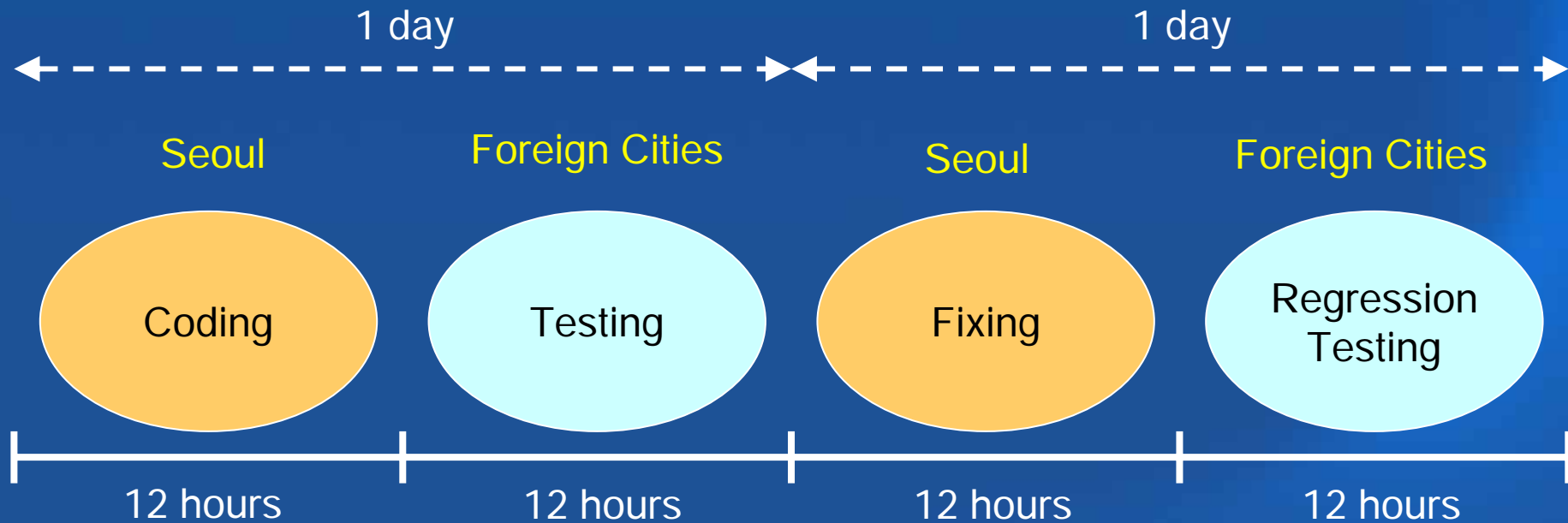
of developers > 30
of testers > 15

Development Environment

Engineer were working 24 hours / day virtually

2 years !!!

Time



Problem Statement

Can We Expect These?

~~Effective
Communication~~

~~High
Productivity~~

~~High
Quality~~

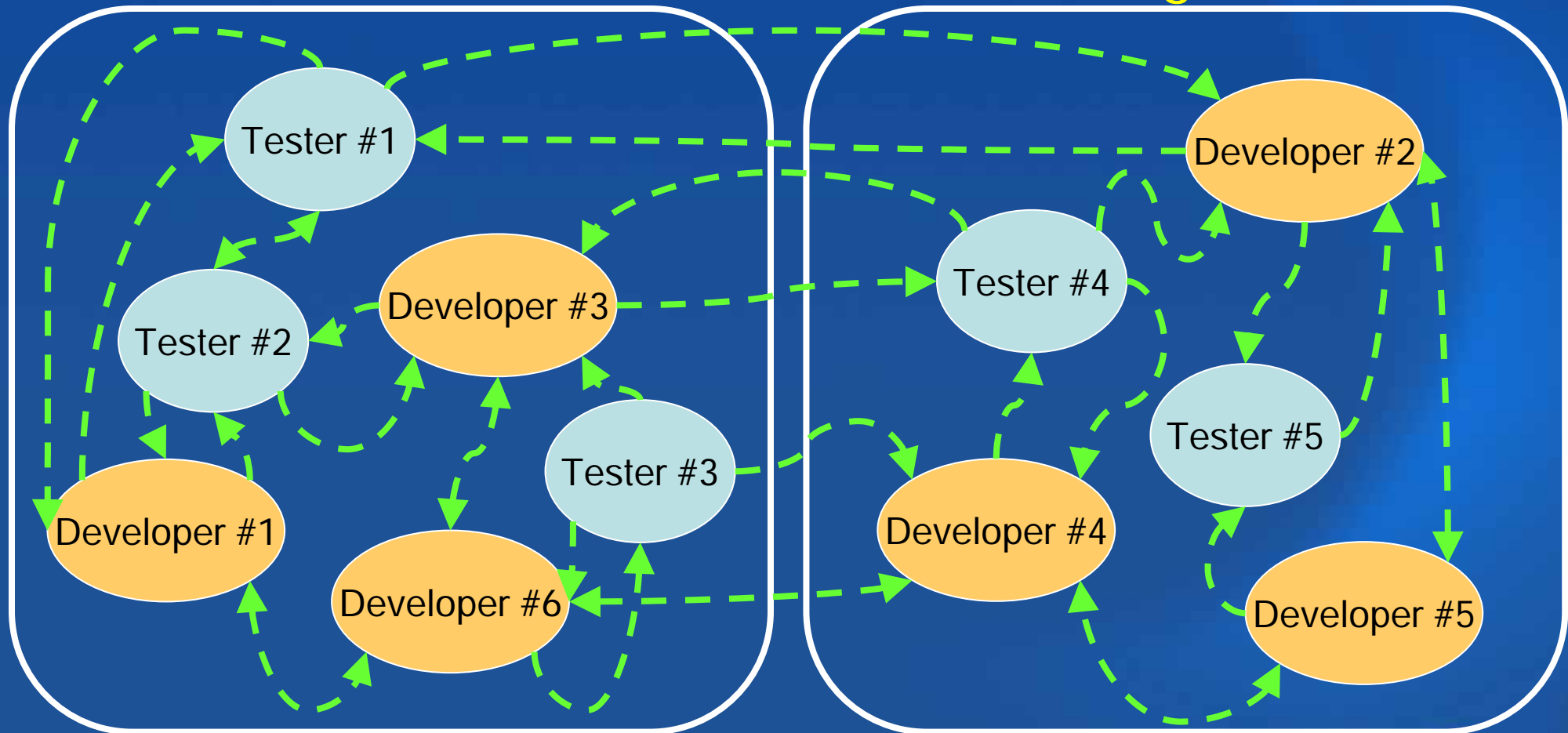
We Expect

Burn-Out Engineers with
Broken Social Relationships

Problem Statement

Need of Systematic & Effective Communication

Seoul 12 hours Lag Foreign Cities



Problem Statement

Huge Amount of Time & Efforts were Wasted

Engineers:

Huge time & efforts were wasted to identify & track
each issue's status

Managers:

Huge time & efforts were wasted to identify & track
project's status

Remember

Small enough for first success
Strong link to business goal

Most Business Critical Area

"Systematic & Effective Defect Tracking" (survival issue)

Not "Project Planning" or "PPQA" in CMMI Level 2

Estimated Improvement Effect

Assumption

At least
0.5 hour / day
Wasted

interview, sampling

0.5 hour
=
\$20USD

company statistics (for example)

Direct
Benefit

one year

$50 \text{ persons} * 0.5 \text{ hour} * 365 \text{ days} * \$ 20 = \$182,500 \text{ USD}$

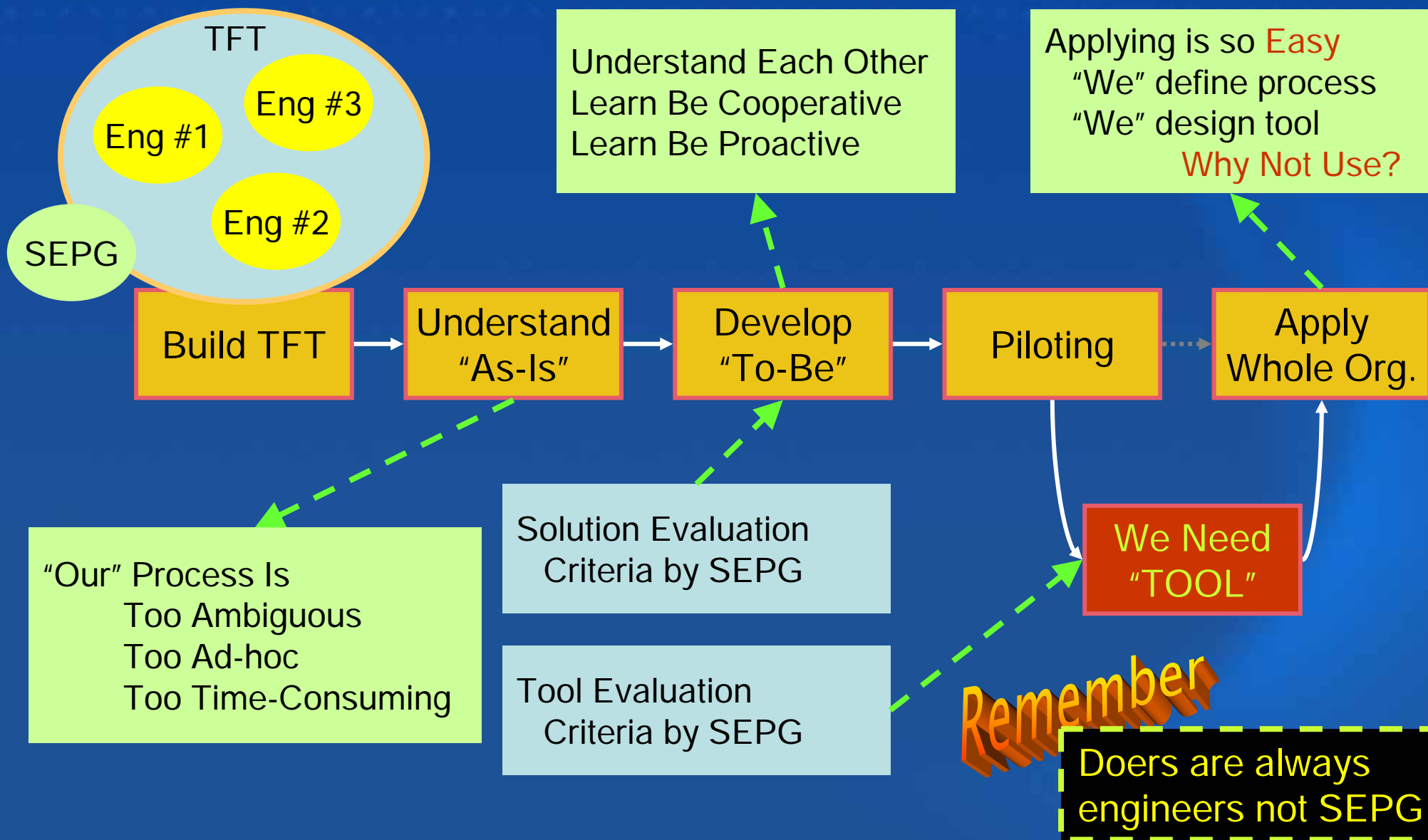
Additional
Benefits

- More productive working opportunities
- Increase engineers' job satisfaction
- Can objectively decide project's progress

Remember

**Consistent & Simple
Measure**

Doers are Engineers Not SEPG



Actual Improvement Effect

Not only one project, **all projects** in the company use the same process and same tool

One year savings:

(Est.) 50 persons * 0.5 hour * 365 days * \$20 = \$182,500USD

(Act.) 250 persons * 0.5 hour * 365 days * \$20 = **\$912,500USD**

Additional Benefits:

Estimated

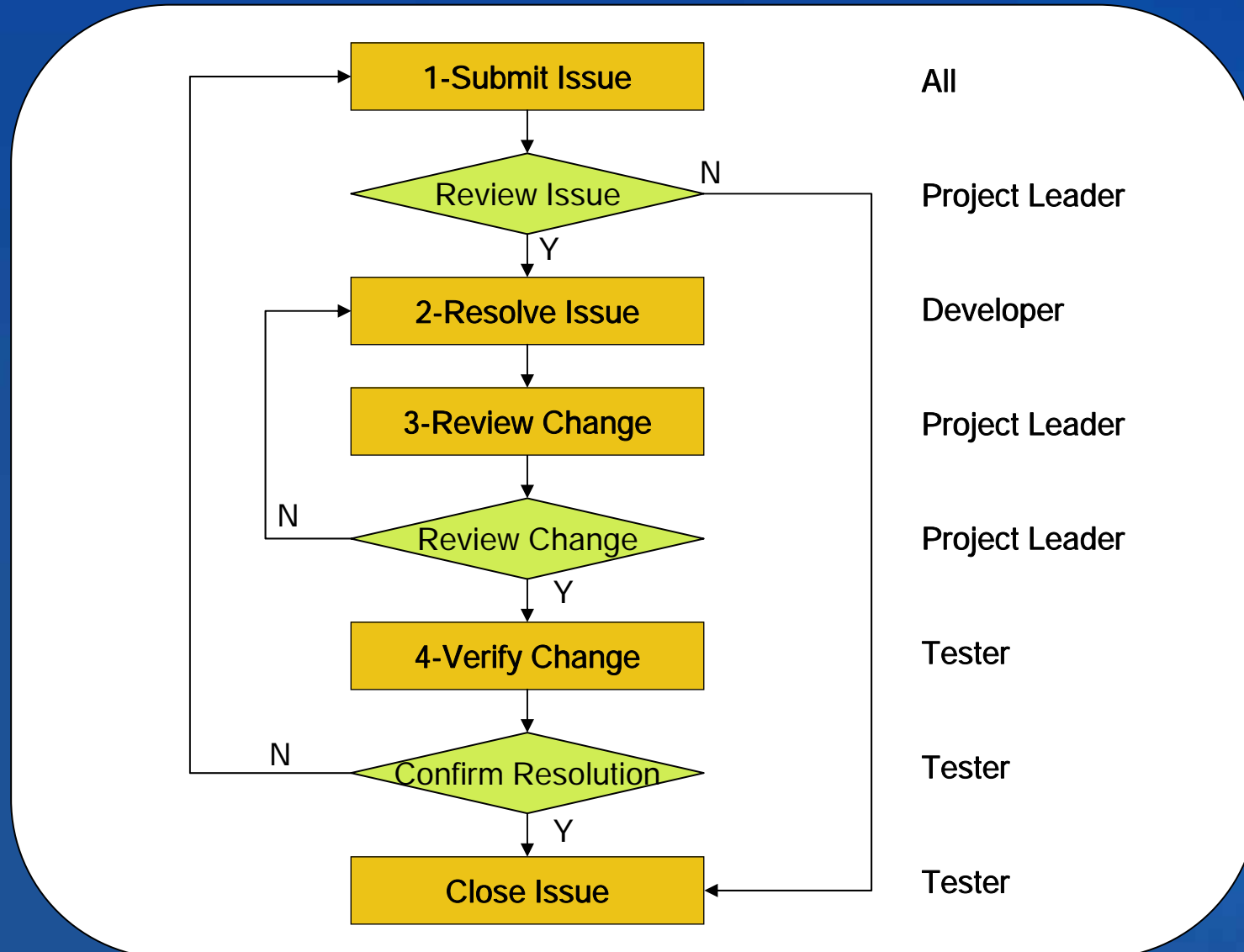
- More productive working opportunities
- Increase engineers' job satisfaction
- Can objectively decide project's progress

More!

- Self-confidence
- Believe in process improvement



Defect Tracking Process (HUMAX)



Defect Tracking System (HUMAX)

Screen Shot of Sample Issue List (Web version)

DevTrack Web: user PI 팀(login name: pi) of "TOTORO" project - Microsoft Internet Explorer

파일(F) 편집(E) 보기(V) 즐겨찾기(A) 도구(T) 도움말(H)

ISSUE LIST DETAIL GO TO NEW REPORT SETTINGS HOME

Owner: * All Members Status: Open Search: {No Query String}

Issues: 31 - 40 Total: 60

No	이슈번호	제목	발견모임	진행상태	Current Owner	Date Assigned
31	TTR32	[major]視聽制限=>日番組限度額設定=>not stored	1 - JC-4000	1 - 미슈발행 상태	정, 준용	07/20/04
32	TTR31	[major]視聽制限=>視聽可能年齡設定=>메뉴상의 설정값으로 동작되지 않음	1 - JC-4000	1 - 미슈발행 상태	정, 준용	07/20/04
33	TTR30	[Major]お好み設定=>all delete service=>? key=>hang-u	1 - JC-4000	1 - 미슈발행 상태	정, 준용	07/20/04
34	TTR29	[Major]B-cas card drew out and it put in =>scramble or hang-u	1 - JC-4000	2 - 작업할당 상태	우, 승갑	07/29/04
35	TTR28	[Major] Display format setting 16:9 =>Detail Info/EPG/Portal =>PIG Display 2picture	1 - JC-4000	1 - 미슈발행 상태	정, 준용	07/20/04
36	TTR26	EPG나 menu같은 still picture 사용하는 메뉴 진입시 잠깐 반짝거림.	1 - JC-4000	1 - 미슈발행 상태	정, 준용	07/07/04
37	TTR25	Guide Table HD, SD에 [다른 출력 구분 없음 예]HD출력에서는 최대 6채널, 4.5 SD출력에서는 4채널 4시간까지 표기 가능인데 현재는 4시간 6채널로 동일 출력됨.	1 - JC-4000	2 - 작업할당 상태	백, 재경	06/07/04
38	TTR24	숫자키를 이용한 채널 튜닝시 2Digit만 Display되는 문제.	1 - JC-4000	2 - 작업할당 상태	최, 안식	06/07/04
39	TTR23	채널리스트에 존재하지 않는 채널 tuning시 메시지 처리 되지 않아야 함.	1 - JC-4000	2 - 작업할당 상태	최, 안식	06/28/04
40	TTR22	A/V play중 카드 제거시 카드 삽입 요구하는 메시지 출력 상태로 나오나 다시 카드를 삽입시 인식하지 못하고 Descramble 되지 않는 현상	1 - JC-4000	2 - 작업할당 상태	우, 승갑	06/28/04

Issues: 31 - 40

Defect Tracking System (HUMAX)

Screen Shot of Sample Issue History (Web version)

DevTrack Web: user PI 팀(login name: pi) of "TOTORO" project - Microsoft Internet Explorer

파일(F) 편집(E) 보기(V) 즐겨찾기(A) 도구(T) 도움말(H)

ISSUE LIST | DETAIL | GO TO | NEW | REPORT | SETTINGS | HOME

DevTrack

이슈설명

이슈이력

작업현황

발생버전

수정버전

Links

첨부

Email

이슈전달

이슈종료

Delete

신규이슈

History

Owner and State Change History

Submit by
오, 은정

1 - 이슈발행 상태

06/07/04 10:49:49
Owner: 정, 준용

Forwarded by
정, 준용

2 - 작업할당 상태

06/07/04 12:55:49
Owner: 최, 안식

Summary Issue ID: TTR7

제목: potal->설정->메인 메뉴에서 하위 항목으로 이동후 다시 ?(back)동작시 PTG 원래 사이즈로 돌아오는 현상.

이슈상세설명: potal->설정->메인 메뉴에서 하위 항목으로 이동후 다시 ?(back)동작시 Scaling된 Video 원래 사이즈로 돌아오는 현상.

작업상세설명: [Forward note from 정, 준용 -- 06/07/04 12:55:49]
이 문제에 대한 부분도 기해결된 것인지 검토 후 대응 바랍니다.

Current Owner:	최, 안식	진행상태:	2 - 작업할당 상태
Assigned by:	정, 준용	Date Assigned:	06/07/04
Submitted by:	오, 은정	Date Submitted:	06/07/04
이슈분류:	1 - 문제점	문제 유형:	01 - 화면표현 문제
발생모델:	1 - JC-4000	개발단계:	2.4-Stage 2 인증중
발생위치:	2 - Application	판정등급:	2 - Major
수정일자:	2004-06-11-10-49-28		

Tracking History

1 Submitted by: 오, 은정
Date Submitted: 06/07/04 10:49:49

potal->설정->메인 메뉴에서 하위 항목으로 이동후 다시 ?(back)동작시 Scaling된 Video 원래 사이즈로 돌아오는 현상.

2 Assigned to: 정, 준용
Date Assigned: 06/07/04 10:49:49

진행상태: 1 - 이슈발행 상태
Assigned by: 오, 은정

3 Assigned to: 최, 안식
Date Assigned: 06/07/04 12:55:49

진행상태: 2 - 작업할당 상태
Assigned by: 정, 준용

[Forward note from 정, 준용 -- 06/07/04 12:55:49]
이 문제에 대한 부분도 기해결된 것인지 검토 후 대응 바랍니다.

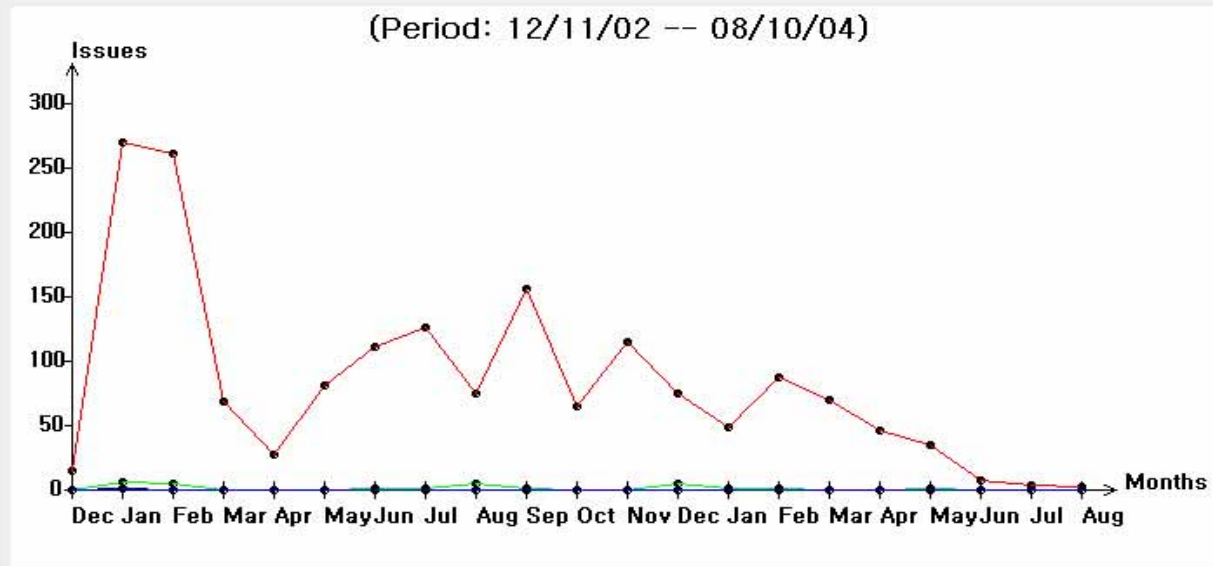
Defect Tracking System (HUMAX)

Screen Shot of Sample Issue Trend Chart (Web version)



Trend By 이슈분류
(Monthly)

이슈분류	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Total	%
1 - 문제점:	15	271	262	69	28	82	112	127	75	157	66	115	76	49	88	71	47	36	8	4	3	1761	97.6%
2 - 기능 개선:	1	7	5				2	2	5	2	1		6	2	2		1	2				38	2.1%
3 - 기능 추가:		2				1	1			1	1											6	0.3%
Total:	16	280	267	69	28	83	115	129	80	160	68	115	82	51	90	71	48	38	8	4	3	1805	100.0%
Percentage(%):	0.9%	15.5%	14.8%	3.8%	1.6%	4.6%	6.4%	7.1%	4.4%	8.9%	3.8%	6.4%	4.5%	2.8%	5.0%	3.9%	2.7%	2.1%	0.4%	0.2%	0.2%	100.0%	



Defect Tracking System (HUMAX)

Screen Shot of Sample Issue Distribution Chart (Web version)

