



# Software Measurement Survival Guide

## Critical Elements for Success



Presented by

**Carol A. Dekkers** CMC, CFPS

Quality Plus Technologies, Inc.

Phone (727) 393-6048

Email: [dekkers@qualityplustech.com](mailto:dekkers@qualityplustech.com)

# Software Measurement Survival Guide

- ▶ Odds and Opportunities
- ▶ The “Matter” of Survival
- ▶ Part 1: Technical Concerns
- ▶ Part 2: Human Aspects
- ▶ Survival Planning

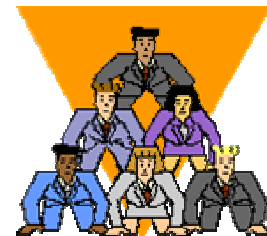


# Odds and Opportunities

- ▶ Only 20% of measurement programs survive to 2<sup>nd</sup> birthday (success) ...Rubin



- ▶ Rule of thumb: ...Jones  
Measurement team =  
1 FTE per 100 developers



# Odds and Opportunities

## ▶ IT shop with 600 developers:

- Metrics team: 6 FTE @ \$40K/yr \* 2 yr = **\$500K investment** (20% success)
- Rework = 45% development...STC 2002 = **\$10.2M rework**
- **> 60% defects in production software due to requirements errors** (Army S/W Metrics 2003)

5% reduction in rework →  
**\$540K saving** + better requirements (\$\$)



# Odds and Opportunities

**The Bottom Line:  
Software Measurement More  
than Pays for Itself**

→ **If Program Survives.**





# Software Measurement Survival Guide

## The “Matter” of Survival → Pre-requisites:

### 1. Technical Concerns:

- Environment (landscape)
- Resources (water, oxygen)

### 2. Human Aspects:

- Sunlight (access to external world)
- Climate (warmth)





# Software Measurement Survival Guide

## Part 1: Technical Concerns





# Survival Guide: 1. Technical Concerns

## ▶ Environment (Landscape)

### ■ Management Sponsorship

### ■ GQM

### ■ Habitable Terrain







## Survival Guide: 1. Technical Concerns

### ▶ Resources (Water, Oxygen)

- Compatible renewable resources

- Breathability (“air index”, smog)

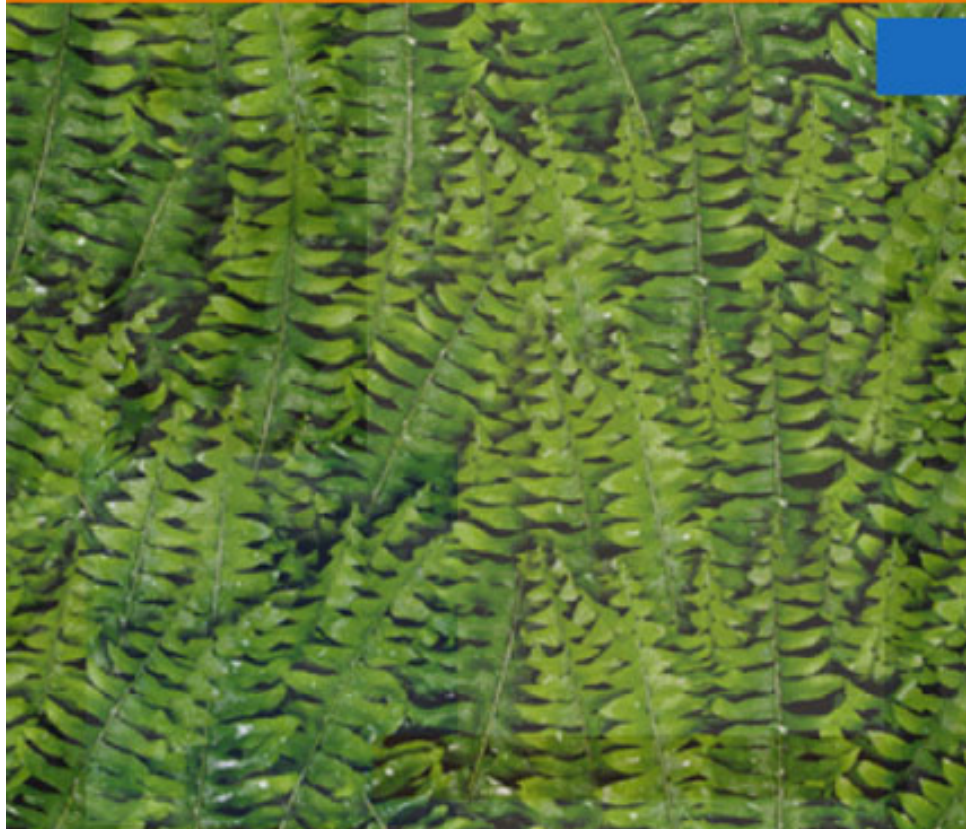
- Adequate supply (today → 2 years → beyond)





# Software Measurement Survival Guide

## Part 2: Human Aspects





## Survival Guide: 2. Human Aspects

- ▶ **Sunlight (access to external world)**
  - **“Cultural” (x2) Concerns**
  - **Communication Consistency**
  - **“Need to Know”**
  - **WIIFM**



## Survival Guide: 2. Human Aspects

- ▶ **Climate (Warmth)**
  - **Truth in Advertising**
  - **Carrot & Stick (Safety)**
  - **Understanding**
  - **Measurement is a “Team Sport”**



# Software Measurement Survival Guide

## Survival Planning





## Survival Guide: Survival Planning

- ▶ **Maximize Known Pre-requisites**
- ▶ **Timing is Everything**
- ▶ **Team Practice**
- ▶ **Passion**



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Email: [dekkers@qualityplustech.com](mailto:dekkers@qualityplustech.com)

**THANK YOU !**

## Survival Guide: Useful References

- ▶ **Quality Plus Technologies website:**  
[www.qualityplustech.com](http://www.qualityplustech.com)
- ▶ **The Goal/Question/Metric Method**  
by Van Solingen & Berghout
- ▶ **CrossTalk back issues:**  
[www.stsc.hill.af.mil/crosstalk](http://www.stsc.hill.af.mil/crosstalk)
- ▶ **PSM: [www.psmc.com](http://www.psmc.com)**
- ▶ **ISO/IEC 15939 (2002)**

