



Using SCAMPI C for Collective Improvement Across a Multi-Business Program

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The Landscape - Motorola



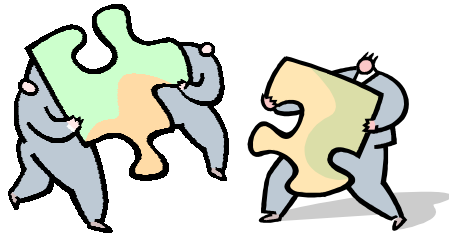
- **A global leader in providing integrated communications solutions and embedded electronic solutions**
- **Conducts business on six continents**
- **Creates integrated customer solutions such as:**
 - Software-enhanced wireless telephone, two-way radio, messaging and satellite communications products and systems
 - Networking and Internet-access products
 - Embedded electronic products
- **More than 66,000 total employees worldwide**
- **Employees in more than 320 locations in 73 countries**
- **23 manufacturing facilities in: USA, Mexico, Brazil, Great Britain, Germany, France, Israel, China, Korea, Taiwan, Malaysia, Singapore**

The Situation - BTS

- **Base Transceiver Station (BTS) – Key element of Cellular Infrastructure**
- **Serving 24/7 support to operators such as KDDI, Sprint, Verizon, Alltel, TATA, and China Unicom**

Locations:

Arlington Heights, IL
Chandler, AZ
Kraków, Poland



Source Code:

2500 KLOC
C, C++, Assembler

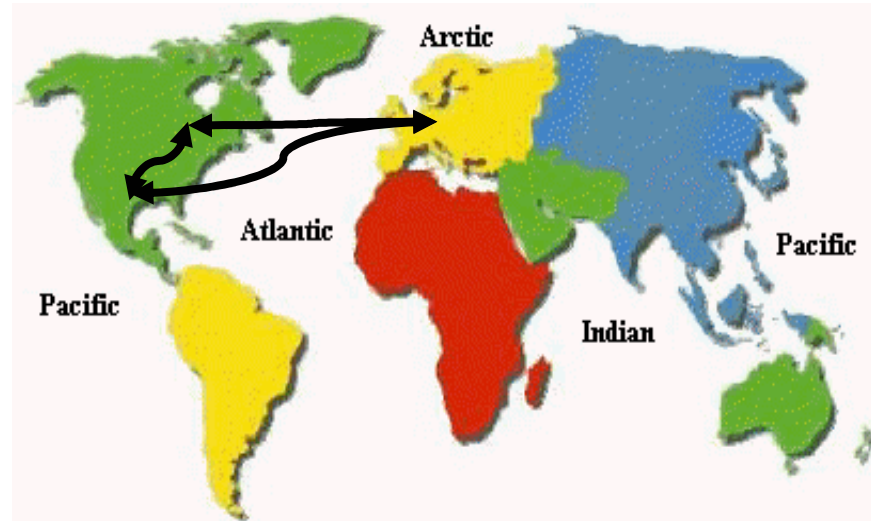


The Situation - GSG

The Global Software Group (GSG) provides cost-effective software and system focused products and services of the highest quality that are responsive to the needs of our customers



The Challenge – “Collective Improvement”

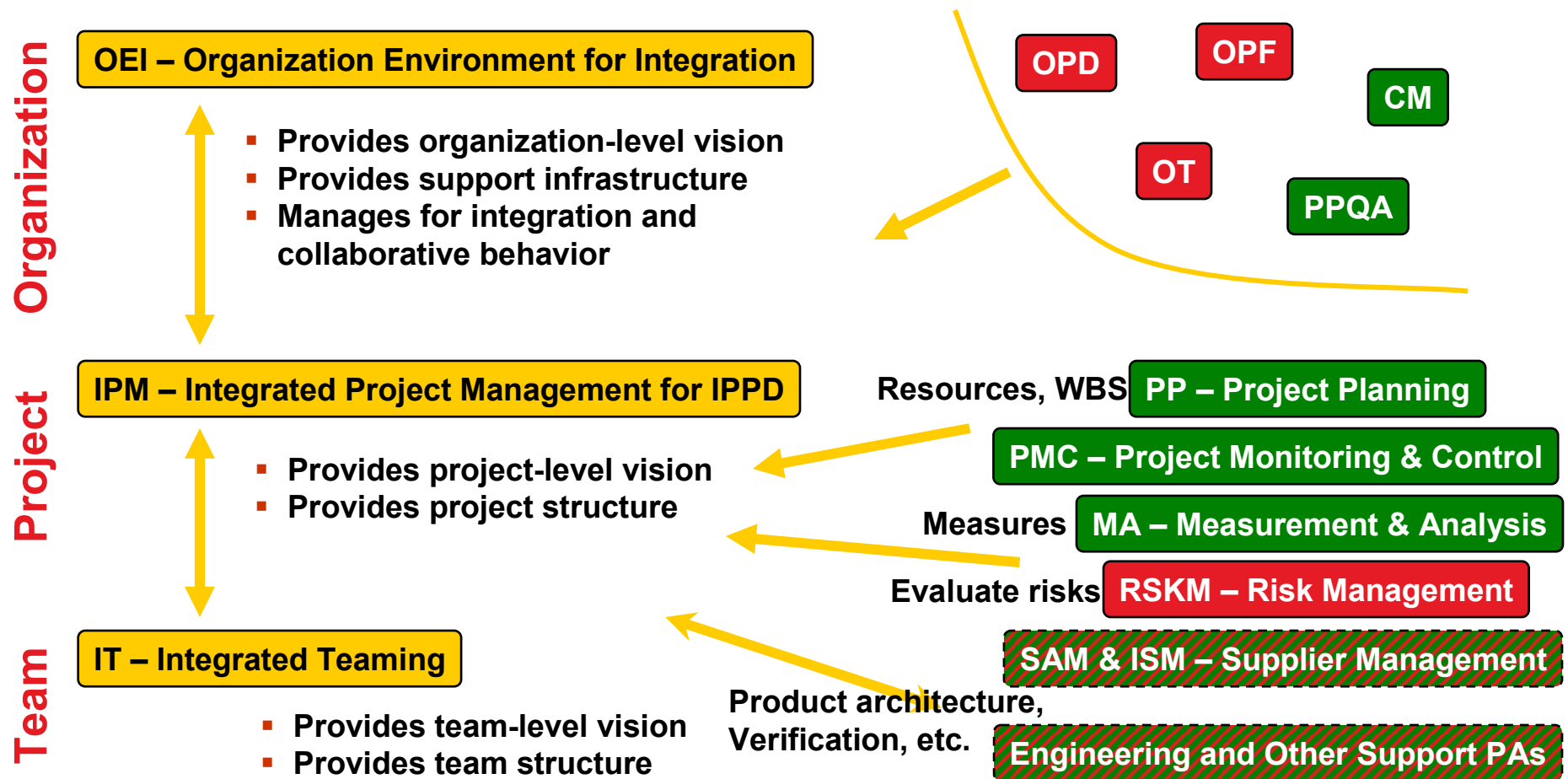


- The senior manager of BTS calls for “**collective improvement**” across the program
- Senior managers from BTS and GSG align their goals and objectives
- Participating in a “combined assessment” is discussed as a possible improvement mechanism

The Solution - CMMI Product Suite

- **CMMI provides a wider scope and integrated approach for process improvement**
(both organizations have been using SW-CMM for several years)
- **Provides focus on integrated activities with IPPD**
(new integrated program / organizational elements to cover)
- **Provides powerful, flexible appraisal tool with SCAMPI**
(focus on business needs)

The Solution – IPPD



The Solution – SCAMPI C (1)



- **SCAMPI provides tailoring of the appraisal method**
 - Focuses on business needs
 - Structures activities to provide required outputs - FINDINGS
 - **Program-specific**
 - **Site or local organization-specific**
 - Can scale to a sample of participating organization, extend to all
 - **Focus on 2 Cellular Networks sites and 1 Global Software Group site**
- **IPPD-focused SCAMPI C proposed to Senior Management**
 - Three 3-day engagements at each selected site in US and Poland
 - Target IPPD practices AND related / linked practices from other PAs
 - Site-specific findings communicated at each site, then consolidated at the end of the appraisal activities

The Solution – SCAMPI C (2)



- **Senior Management supports IPPD SCAMPI C**
 - Co-Sponsors from the two businesses
 - Team members from across the businesses
 - Authorized and experienced SCAMPI B&C Team Leader
- **Site Managers and BTS project teams participate**
 - Preparation not required, minimum effort to participate
 - Short overview of IPPD at kick-off meeting
 - One interview session for each IPPD-specific PA (OEI, IT, IPM)
- **Focus is on opportunities and actions across the program**
 - Consolidated final findings briefing for Sponsors
 - Post-appraisal action planning
 - Results

The Findings – Overview



- **29 Findings Resulted in**
- **38 Specific Actions Distributed Between**

Category	# Findings	# Actions
Shared Vision	3	3
Scorecard Communication	1	4
Project Execution	6	9
Feature Team Definition & Risk Mitigation	7	7
Meeting Effectiveness	2	3
Lessons Learned	3	3
Participation in Process Improvement	4	5
Team Performance	3	4

The Findings – Example



The Feature Team concepts are new and not clearly defined and communicated ...

- **No formal mechanisms for balancing “home” organization (e.g., Functional Area) and Feature Team responsibilities (OEI SP2.3-1)**
- **There is no common definition of a “project” used across BTS (IPM SP1.1-1)**
- **There is confusion about the responsibilities and authority of the Feature Team Manager (IT SP2.3-1)**
- **Inconsistent identification of risks that have been captured to mitigate the unclear Feature Team definitions and impacts on integrated teams (RSKM SP2.1-1)**

Actions & Results



An action:

- **Fully define and deploy process assets to support Feature Teams as Integrated Product Teams (IPT)**
 - Full-time resource dedicated to develop detailed process and guidance for Feature Teams
 - All impacted Process Area Teams are making modifications for their areas
- ***Examples of specific detailed actions***
 - Identify skills required for development activities including Feature Team roles
 - Create guidelines for balancing of Functional Area and Feature Team responsibilities
 - Ensure that the Feature Team procedures for conflict resolution are unique, clear and effective
 - Investigate a more flexible approach to how the M-gates framework can be applied to individual Feature Teams
 - Provide Feature Manager ownership of schedule
 - Develop supporting process assets

Lessons Learned



- **IPPD is useful at the front-end of process improvement activities not just as something to add at the end (after other process areas are completed)**
 - e.g., GSG includes the tailored “IPPD-focused SCAMPI C” method for establishing GSG-Customer Integrated Process
- **IPPD is a platform for integrating all business functions and operations**
- **The SCAMPI “family” of appraisals can be tailored to meet specific business needs**
 - SCAMPI B & C are not just “little As”

Feedback (1)



Some quotes from senior managers

- ***“This will have an impact on our effectiveness, how we work together across the locations”***

BTS Program Director

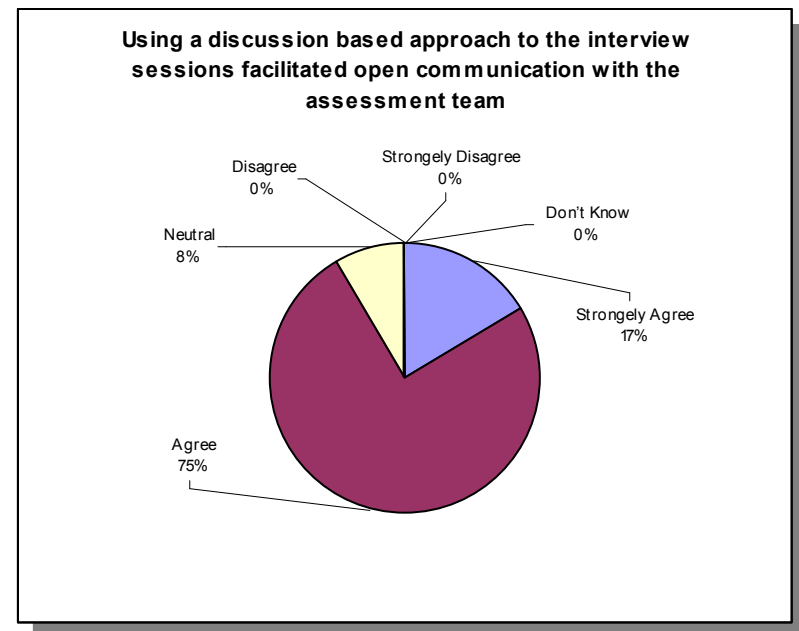
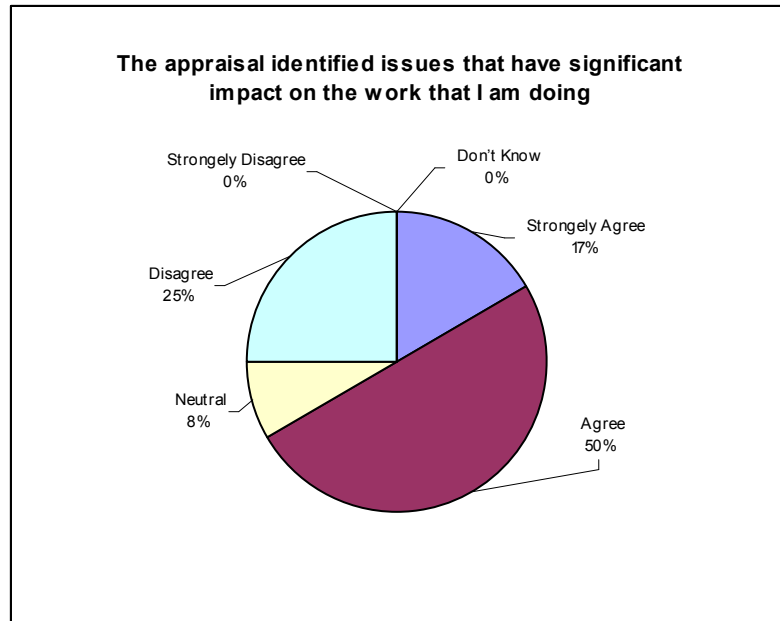
- ***“I am very happy with the results...but we are not yet through all of the actions”***

GSG BTS Operations Manager

Feedback (2)



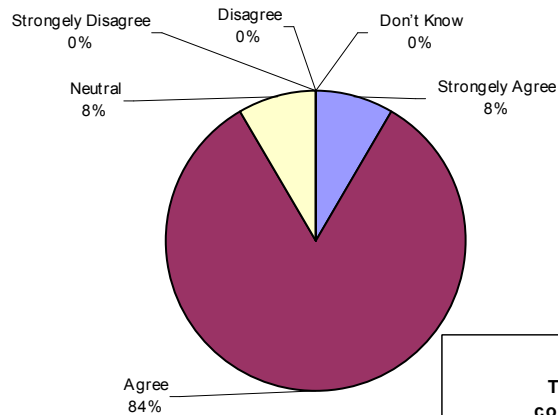
- **Feedback collected from the participants (via web survey)**



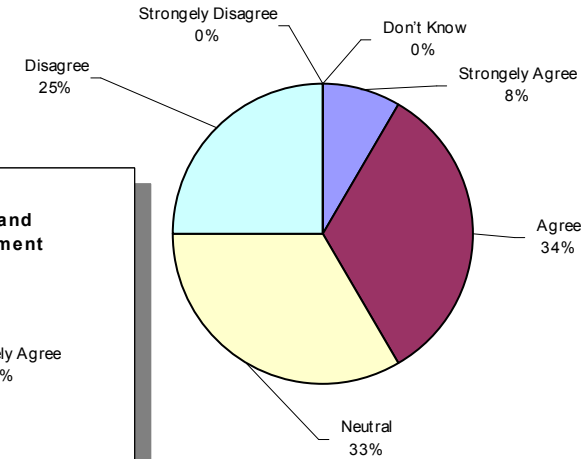
Feedback (3)



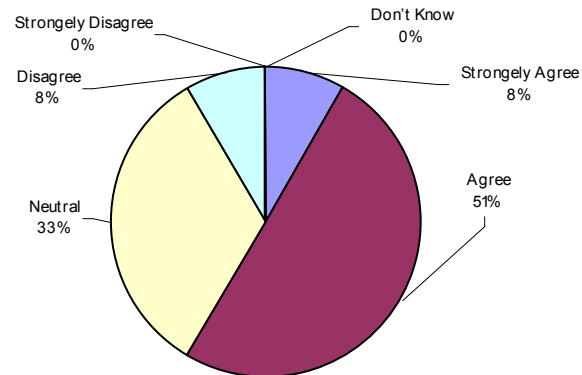
Collecting feedback from the three sites separately allowed for capturing site specific collaboration issues



The appraisal resulted in changes that will benefit the BTS organization



The appraisal activities allowed me to better understand concepts of Integrated Product and Process Development and how they apply to my work environment



Summary



We found that:

- **the CMMI product suite is useful to respond to a business issue (not just appraising for a number but focusing on improvement areas)**
- **IPPD discipline proved to bring value within the overall business or improvement context**
- **the tailored version of SCAMPI appraisal method used allowed the organization to identify ‘weak’ areas and produce a set of actions to improve the operations of a multi-business program in global environment**



Q & A