From Serialized to Parallel resource models via Intelligent Matching / Swarming

Bob Blackburn
Director, Cisco Services
Services Workflow Transformation
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Agenda

• Serial vs. Parallel resource pooling
• What you need to know
• Cisco story, Services as a Network
• Cisco specifics
  - Scope and Activity
  - By the numbers, Stats
• Serialized vs. Parallel resource utilization, visualization of old and new models
• What we’ve learned - Intelligent Matching
• What we’ve learned – Collaboration / Intelligent Swarming
• How We Determine “Work”
Old Model Escalation, Wedding Cake/Pyramid, Streaming

- Engagement time happens over long periods of time “Serialized”
- Staffing approaches where simpler
- Multiple levels/tiers, usually staffing was linear 1:1, Calls/Cases per x period = more or less HC

New model - Intelligent Matching & Collaboration “Intelligent Swarming”

- CSE time is potentially “Parallel”
- 1:1 matching doesn’t change Headcount requirements, does change resource mix
- Collaboration / Intelligent Swarming 1:n Swarming will change resource alignment needs
What you need to know

• YES it can be done. You can actually get your organization there!
• Your organization will become more efficient and your customers will be happier!
• Applicable beyond your support organization!

Reality is;
• It doesn’t come free, will require some initial investment
• Moving to a Intelligent Swarming model is a Mind and Behavioral shift more than anything
• It’s no longer about productivity as we’ve traditionally known it, Value is key outcome “Work is Work”
• Change Leadership and a very robust Change Management effort will be required
• You’ll need to change Policy, Process and potentially implement missing technology
• Ability to Measure, Recognize and address in real-time undesirable behaviors
• Your staffing teams will say it is creating havoc, can’t model it and it requires more HC, It doesn’t!
• Requires creation of a resource profile and implementing a BRE. They are cornerstone elements
Services as a Network
Delivering an Industry-leading Customer Experience – Built for the Future, Today

1. Intelligent Matching
   Connects customers with the experts and knowledge to solve the problem

2. Collaborative Engagement
   Global network of experts, solving problems as a team

3. Knowledge Creation and Re-Use
   Knowledge is systematically created, refined and re-used to solve customer problems

4. Integrated Workflow
   A single environment where experts can do their job without using multiple tools

5. Reputation & Gamification
   Encourages participation, drives quality content and recognizes experts’ contributions

“Play Catch, Not Ping Pong”
“People to Content, People to People, Content as Institutional Learning”
Scope and Activity

Start - June 2011

• Move from Escalation to Intelligent Matching and Collaborative model
• Global effort, rolled out 8 Countries / 29 regional / site phases
• Initial target 3600 users (Support Engineers and Managers)
• Intelligent Matching, “Right Resource(s) at the Right time”
• Collaboration = Intelligent Swarming
• Adoption tag line was “Play Catch, Not Ping Pong”

Current – May 27th

• ~ 8K users
• Breaching Technical Services, into Advanced Services, Legal and Cisco Engineering
• ~1.3M cases a year
• 390K Require Collaboration “Intelligent Swarming”
  – 59% of Cases matched to the first person required no collaboration and resolve there
  – 30% required real-time Click to Collaborate “Intelligent Swarming” to resolve
  – 11% Matched to wrong person/team
• User acceptance of new model 4.76 out of 5
• Avg Collaboration / Swarm duration time ~ 39 minutes
• 174 Rapid experiments (manual sprints testing policy, process and behavioral changes, 5 days or less)
• 49 POCs (Proof Of Concepts, 6 – 25 days testing Policy, Process and Behavioral changes with needed Technology)
• 7 Pilots (26 – 90 days, testing Policy, Process, Behavioral and Technology changes end to end)
• We provided two measurements, Adoption and behavior (Using new processes?, Not accepting work?)
Visualization of old and new models
Serialized Resources & Workflow

Old Models of Escalation, Support Tiers, Wedding Cake, Pyramid, Streaming, etc.
Scenario 1, Case pulled from general Q, solved by original CSE

Key dissatisfies inherent with this model
• First person wasn’t guaranteed to be the right person (success approx 7% -11%)
• Delay in resolution
• Frustrated customer
• Frustrated employee
Scenario 2, Escalation Model, Single technology

Key dissatisfies inherent with this model
- 1st person wasn’t the right person
- 2nd Person wasn’t the right person
- Delay in resolution
- Frustrated customer
- Frustrated employee
- Knowledge of customer lost as case moved
- Opportunity to build org expertise was lost as final resolution was not passed down
Scenario 3, Escalation Model with Outtask, multiple technology

Key dissatisfies inherent with this model
- 1st 3 people weren't the right person
- Delay in final resolution
- Frustrated customer
- Frustrated employee
- Knowledge of customer lost as it moved
- Opportunity to build org expertise was lost as final resolution was not passed down
Parallel Resources & Workflow

New Models via Intelligent Matching & Collaboration, “Intelligent Swarming”
Scenario 1 - Intelligent Match, Single tech, no collaboration

Approximately 59% of all cases

Customer Experience

CSE 1 (Intelligently Matched, SR owner, Tech 1)  
4 hrs

TTR = 4 hrs  
Customer = 4 hrs  
Cisco = 4 hrs

Key Success indicators

- 1st Engineer never needed anyone else to help resolve
- Resolution time considerably shortened
- Reduced Customer and Cisco investment
Scenario 2 - Single tech, Collaboration “Swarming” with higher Skill

Approximately 24% of all cases

Key Success indicators

• Single owner
• Issue solved via no change of ownership
• Reduced Customer and Cisco investment
• Just in time / Real-time learning
Scenario 3 – Multiple technology, Collaboration “Swarming” (~8%)
Approximately 6% of all cases

Key Success indicators
• Single owner
• Issue solved via no change of ownership
• Reduced Customer and Cisco investment
• Just in time / Real-time learning

Customer Experience

<table>
<thead>
<tr>
<th>CSE 1 (Intelligently Matched, SR owner, Tech 1)</th>
<th>8 hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSE 2 (Collab responder, Tech 1)</td>
<td>3 hrs</td>
</tr>
<tr>
<td>CSE 3 (Collab responder, Tech 3)</td>
<td>5 hrs</td>
</tr>
</tbody>
</table>

TTR = 8 hrs  
Customer = 8 hrs  
Cisco = 16 hrs

Parallel Time, 2nd 3rd Engineers are not available for new High severity work
Scenario 4 – **New Opportunity!** Intelligent Swarming, creating virtual on demand Solution Support

Key Success indicators

- New revenue streams
- Meets customer / Market demands
- Requires no new investment of Resources, Policy, Processes, Tools

Customer Experience

- **CSE 1 (Intelligently Matched, SR owner, Tech 1)**: 4 hrs
- **CSE 2 (Intelligently Matched, Tech 2)**: 2 hrs
- **CSE 3 (Intelligently Matched, Tech 3)**: 3 hrs

**TTR = 4 hrs**
**Customer = 4 hrs**
**Cisco = 9 hrs**

Parallel Time, 2nd 3rd engineers are not available for new High Severity work
What we’ve learned - Intelligent Matching

Intelligent Matching (1:1 matching)

Wins
- Time to Resolution dropped considerably approx 33%
- Customer Sat rose by approx 7%
- Handled approx 300K more cases with reduced headcount
- Reinvested some HC to off set Collaboration / Swarming resource requirements
- Returned Soft and Hard ROI
- Employee frustration went down

Adjustments
- 1:1 match doesn’t change Headcount requirements, does change resource mix
- Addressed via normal modeling / forecasting methods and adjusted resource skills mix where needed
What we’ve learned – Collaboration / Intelligent Swarming

Collaboration / Intelligent “Swarming” (1:n matching)

Wins
- Reduced Technical Escalations by approx 86%
- Reduced customer call backs by approx 27%
- Time To Resolution dropped approx 40% (for previously escalated cases)
- Customer Sat rose by approx 7%
- Handled approx 300K more cases with reduced headcount
- Reinvested some HC to off set Collaboration / Swarming resource requirements
- Returned Soft and Hard ROI)
- Organization up skilling/ learning
- Employee frustration went down
- Positions us for Solution Support (New Revenue opportunities)

Adjustments
- Will change resource alignment needs from serial to parallel, approx +5% (40min) Allocated to Parallel staffing
- Needed behavior change, Collaboration / Swam request are no different or less important than new case = “Work”
- Transitioning from a case to a “Work” forecasting model
- Transitioning Increasing resource alignments from inbound to internal
How We Determine “Work”

- Lifecycle Data
- Historic SR Volume
- NPI Data
- Collaboration / Swarming Data
- Lifecycle Recommendations
- SR Forecast at RKC Level
- Product / Service Forecast
- Collaboration / Swarming Forecast
- CSE Workload Forecast
- TL Workload Forecast
- CER Engagements
- Serviceability Engagements
- CAP / Escalation Support
- Documentation / Training
- Collaboration / Swarming Forecast
- Collaboration / Swarming Data
What’s next?

• Knowledge Worker Economy Phase 2, Intelligent Swarming fueling:
  - Reactive $\rightarrow$ Proactive $\rightarrow$ Preemptive, From Do to Think,
  - Content becomes automation
  - Resource Profiles goes from Declared to Derived
  - Aggregate little r (reputations) into Big R
  - Integrated Reputation and Performance Management (Required, Social, Formal)
Q & A
Thank you.