Module 3

DECISION-MAKING TOOLS

What are team Decision-Making Tools?

Two tools frequently used by teams to make decisions are Multivoting and Nominal Group Technique. While idea-generating tools such as Brainstorming produce a list of possible alternatives, Multivoting and Nominal Group Technique help to identify the important or popular items or prioritize the items on a list (Viewgraph 1).

NOTE: It is important to remember that not all decisions are made in a team situation. Of those decisions that are made by teams, not every one is going to be made using these tools.

How does a team select the right tool to use?

- Try Multivoting if you need to:

  > Reduce a long list of ideas and assign priorities quickly and with a high degree of team agreement

  > Identify the important items on a list

- Try Nominal Group Technique if you need a more structured approach to:

  > Generate, clarify, and evaluate a sizable list of ideas, problems, or issues

  > Prioritize the items on a list

Tools for Making Decisions

- Multivoting

  > Reduces long lists of ideas

  > Identifies important items

- Nominal Group Technique

  > Generates ideas

  > Prioritizes items

DECISION-MAKING TOOLS   VIEWGRAPH 1

MULTIVOTING

What is Multivoting?

Multivoting is a group decision-making technique used to reduce a long list of items to a manageable number by means of a structured series of votes (Viewgraph 2). The result is a short list identifying what is important to the team.

When should a team use Multivoting?

Use Multivoting whenever a Brainstorming session has generated a list of items that is too extensive for all items to be addressed at once. Because Multivoting provides a quick and easy way for a team to identify the most popular or highest priority items on a list—those that are worthy of immediate attention—this tool can be helpful when you need to (Viewgraph 3)

- Reduce a large list of items to a workable number quickly, with limited discussion and little difficulty.

- Prioritize a large list without creating a situation in which there are winners and losers in the group that generated the list.

- Identify the important or popular items on a large list.

What Is Multivoting?

A group decision-making technique used to reduce a long list of items to a manageable number by means of a structured series of votes.

Benefits of Multivoting

- Reduces a list

- Prioritizes a list

- Identifies important items

What are the procedures for Multivoting?

Follow these steps to conduct Multivoting (Viewgraph 4):

Step 1 - Work from a large list of items developed by Brainstorming or another appropriate idea-generating technique.

Step 2 - Assign a letter to each item to avoid confusion of item designations with the vote tally.

Step 3 - Vote

- Each team member selects the most important one-third (or no more than one-half) of the items by listing the letters which appear next to those items. For example, if there are 60 items, each person should choose the 20 items (one-third of the total) he or she thinks are most important.

- Each team member may cast only one vote per idea and must cast all allotted votes.

- Voting may be done either by a show of hands or by paper ballot when the team chooses to preserve confidentiality.

Step 4 - Tally the votes. Place a checkmark next to each item for each vote it received. Retain the items with the most votes for the next round of voting. Scholtes, in The Team Handbook [Ref. 4, p. 2-41], provides the following Rule of Thumb (Viewgraph 5) for deciding how many items to eliminate in each round, depending on the size of the group:

- If the team has 5 or fewer members, eliminate those items that receive 2 or fewer votes.

- If the team has 6 to 15 members, eliminate all items that receive 3 or fewer votes.

- If the team has more than 15 members, eliminate all items that receive 4 or fewer votes.

Step 5 - Repeat. In the second round, each person again selects the top one-third of the items. Repeat steps 3 and 4 until only a few items remain. Never multivote down to only one item.

The items that were not identified as priorities should be retained as backup data or for future use by the team in its improvement efforts.

Multivoting Procedures

Step 1 - Work from a large list

Step 2 - Assign letter to each item

Step 3 - Vote

Step 4 - Tally the votes

Step 5 - Repeat

Multivoting Rule of Thumb

Number on Team	Eliminate items with
5 or fewer	0, 1, or 2 votes
6 to 15	3 or fewer votes
more than 15	4 or fewer votes

How can our team practice Multivoting?

Three exercises that will enable teams to practice this tool are on the following pages. But first, let's walk through an example adapted from the U.S. Air Force Process Improvement Guide [Ref. 5, p. 16].

EXAMPLE: Members of a Command's Planning Board for Training conducted meetings which were not always as productive as they might have been. The XO called a meeting to identify the reasons for the lack of meeting productivity and to determine which reasons the team thought most important. The XO led a Brainstorming session which produced the following list:

<div align="center">

Lack of Meeting Productivity

</div>

A. No agenda	I. Problems not mentioned
B. No clear objectives	J. Interrupted by phone calls
C. Going off on tangents	K. Few meaningful metrics
D. Extraneous topics	L. Interrupted by visitors
E. Too many "sea stories"	M. No administrative support
F. Vital members missing from meeting	N. Meetings extended beyond allotted time
G. Not enough preparation for meetings	O. Members distracted by pressing operations
H. Too much "dog and pony"	P. Unclear charts

The team used Multivoting to reduce this list to a manageable size:

● Each of the 6 members of the team was allowed 8 votes (half the number of items).

● The votes were tallied, as shown in Viewgraph 6, and the top 8 items were carried forward to the second round.

● The items that had 4 or more votes in the first round were reduced to 4 in a second round of voting. The group chose to focus on problems F, G, H, and J, as shown in Viewgraph 7.

Multivoting Example
First Vote Tally

| A. No agenda

|||| B. No clear objectives

|| C. Going off on tangents

| D. Extraneous topics

|| E. Too many "sea stories"

卌| F. Vital members missing from meeting

卌 G. Not enough preparation for meetings

|||| H. Too much "dog and pony"

| I. Problems not mentioned

卌 J. Interrupted by phone calls

|| K. Few meaningful metrics

|||| L. Interrupted by visitors

||| M. No administrative support

|||| N. Meetings extended beyond allotted time

|||| O. Members distracted by pressing operations

P. Unclear charts

Multivoting Example
Second Vote Tally

B. No clear objectives

卌 F. Vital members missing from meeting

卌 G. Not enough preparation for meetings

卌 H. Too much "dog and pony"

|||| J. Interrupted by phone calls

L. Interrupted by visitors

|| N. Meetings extended beyond allotted time

||| O. Members distracted by pressing operations

MULTIVOTING EXERCISE 1. A team has been established to reduce fear in the organization. Although all of the members agree that fear should be reduced, some do not believe that fear is a widespread issue. The team has decided to identify the signs of fear within the workplace.

To develop a list, the team brainstormed the following question:

What are the signs of fear in our workplace?

For the purposes of this exercise, your team can either use the list provided in Viewgraph 8 or brainstorm its own list.

Now follow the procedures for Multivoting to determine the most common signs of fear.

- If the team brainstormed its own list, assign a letter to each item.

- Vote, using a show of hands. Each person votes for the one-third of the total items that he or she considers most important.

.
- Record the votes using the tally sheet in Viewgraph 9.

- Repeat the vote and tally steps until the list is reduced to a manageable number to be investigated.

- Remember to apply the Rule of Thumb on page 8 for the size of your team.

Multivoting Exercise 1

SIGNS OF FEAR IN THE WORKPLACE

a.   Flooded with detail

b.   "Don't rock the boat"

c.   Mixed messages

d.   Attacks/defensiveness

e.   People afraid to say "I don't know"

f.   Chronic indecision

g.   "This too shall pass"

h.   News always good

i.   Withholding information

j.   Changing subject

k.   Self-protective behaviors

l.   Hidden agenda syndrome

m.   Turf battles

n.   Not willing to accept responsibility

o.   We vs. they

p.   Resisting requests

q.   Tampering

r.   Staffing redundancies

s.   Constantly changing policies

t.   Myopic vision

u.   Isolation

v.   Micromanaging

w.   Goals without a plan for achieving them

x.   Blame others

y.   Denial

z.   Resistance to new knowledge

aa. People afraid to ask questions

ab. "This is good for my people, not for me"

ac. Concern with return on investment

ad. Focus on grades, instead of learning

ae. Lack of new ideas

af. Fear that some work can be done by fewer people

ag. Resistance to change

ah. Avoidance of risk-taking

ai. "Just doing my job"

aj. Stress

ak. Recurrent absenteeism

al. Widespread dissatisfaction

am. Deadline anxiety

an. Enforcement approach to rules

ao. Turnover of creative thinkers

Source: Managing Fear in the Workplace, TQLO Publication No. 93-01

Multivoting Exercise Tally Sheet

A _____   M _____   Y _____   AK _____

B _____   N _____   Z _____   AL _____

C _____   O _____   AA _____   AM _____

D _____   P _____   AB _____   AN _____

E _____   Q _____   AC _____   AO _____

F _____   R _____   AD _____   AP _____

G _____   S _____   AE _____   AQ _____

H _____   T _____   AF _____   AR _____

I _____   U _____   AG _____   AS _____

J _____   V _____   AH _____   AT _____

K _____   W _____   AI _____   AU _____

L _____   X _____   AJ _____   AV _____

MULTIVOTING EXERCISE 2. A team of six people has been asked to determine the causes of a perceived problem in the command. The group brainstormed 18 possible causes and needs to narrow the list down. They have agreed to consider all items with three or more votes.

Apply what you have learned to answer the following questions:

- How many votes will each person be allowed?

- Which items are going to be considered? (Use the voting information in Viewgraph 10 and the Tally Sheet from Exercise 1 to formulate your answer.)

- Would it have changed the results of the exercise if the group had multivoted to reduce the list by one-half?

- Was the Rule of Thumb applied in this scenario?

Answer Key:

- 1/3 x 18 = 6 votes per member.

- The team will consider items C, D, I, N, Q, and R (Viewgraph 11).

- The outcome might have been different because each team member would have had 3 additional votes, or a total of 9 votes per person.

- The Rule of Thumb (see Viewgraph 5) was not applied. When the team has 6 to 15 members, items receiving 3 or fewer votes should be set aside. If the Rule of Thumb had been applied in this example, items N and R would have been the only ones considered. The point is, a Rule of Thumb is flexible and may be modified by the team, as it was in this exercise.

Multivoting Exercise 2

Voting Information

Petty Officer Smith	A, B, D, I, N, R
Mr. Avery	C, D, I, N, Q, R
Lt. Tam	B, J, L, N, R, Q
Ms. Matsumoto	A, C, D, I, N, R
Sgt. Bedsole	E, G, L, N, P, Q
Petty Officer Browne	C, E, H, K, M, O

Multivoting Exercise 2

Tally Sheet

A = II	G = I	M = I
B = II	H = I	N = ʜʜⱠ
C = III	I = III	O = I
D = III	J = I	P = I
E = II	K = I	Q = III
F = 0	L = II	R = IIII

MULTIVOTING EXERCISE 3. In this exercise, you can make a practical application of what you've learned. No answers are provided because each group that does this exercise will have a different brainstormed list and Multivoting results.

Brainstorm and then use the secret ballot method to multivote the following question:

How can information flow be improved within the organization?

NOTE: There are a couple of things to keep in mind as you do this exercise:

● You may need to define some of the words in the question, such as information, flow, and the organization.

● You must establish an Operational Definition for improved.

● You should use the secret ballot method when there is a need to maintain confidentiality. Each team member writes his or her choices on a slip of paper, folds it, and passes it to the facilitator, who tabulates the results on a chartpack or whiteboard and disposes of the slips off line.

NOMINAL GROUP TECHNIQUE

What Is Nominal Group Technique?

Nominal Group Technique, or NGT, is a weighted ranking method that enables a group to generate and prioritize a large number of issues within a structure that gives everyone an equal voice (Viewgraph 12). The tool is called nominal because there is limited interaction between members of the group during the NGT process.

When should a team use NGT?

When a team needs to create a list of options and rank them, using NGT effectively neutralizes the domination of the loudest person, or the person with the most authority, over the decision-making process. This tool can also help a team achieve consensus about the relative importance of issues. The final result may not be everyone's first priority, but they can live with it.

NGT is a good tool to use when dealing with controversial or emotional issues, or when a group is stuck. It is particularly useful when you need to (Viewgraph 13)

- Reduce the number of issues for easier handling.

- Get input from all team members.

- Rank items in priority order.

What Is Nominal Group Technique?

A weighted ranking method that allows a group to generate and prioritize a large number of issues within a structure that gives everyone an equal voice.

Benefits of Using NGT

- Reduces the number of issues

- All team members participate

- Rank orders items

What are the procedures for NGT?

NGT is a facilitated process that has two parts. The following description of how to conduct an NGT session is adapted from The Team Handbook [Ref. 4]:

NGT PART I - The issue is defined and the team generates ideas (Viewgraph 14).

- Introduce and clarify the issue to be addressed by the team. Write the issue on a chartpack where everybody can see it. Allow for clarification, but do not let the group engage in a discussion of the issue itself. Remember to define unclear terms.

- Generate ideas to address the issue at hand.

  > Working in silence, each team member writes down his or her ideas on a piece of paper. People should not confer with each other and should sit quietly until everyone finishes writing.

  > Depending on the complexity of the topic, 5 to 10 minutes should be allowed for the silent process. People need to have enough time to get the broad, general ideas down, but not enough to create long, detailed lists.

- Collect the team's ideas. Each team member in turn reads out one of his or her ideas. Write each idea on the chartpack. This round robin should continue until all of the ideas have been offered and recorded. There should be no discussion or side conversations during this part of the session.

NOTE: If post-its™ are available, you may want to ask the participants to write each of their ideas on a separate sheet and hand them in. You can display the ideas randomly, rather than writing them down. These post-its™ can be used later to create an Affinity Diagram.

- Clarify ideas. Read each idea out loud. If clarification is needed, the person who provided the idea should explain it now. This is an opportunity to clean up the wording of any unclear statements. Others may contribute if necessary.

- Combine ideas. Combine like ideas when feasible, but only if both originators agree to it. If they cannot agree, leave the two ideas separate.

NGT Part I - Define the Issue and Generate Ideas

- Define the issue

- Generate ideas

- Collect ideas

- Clarify ideas

- Combine ideas

DECISION-MAKING TOOLS   VIEWGRAPH 14

NGT PART II - The team makes the selection (Viewgraph 15).

● **Assign a letter designation to each separate idea.** As with Multivoting, the facilitator assigns a letter to avoid confusion with the vote tally.

● **Rank the ideas independently.** Each team member writes down the items by their letter designations and assigns them a numeric value based on his or her judgment of what is most important and what is least important. The highest number is assigned to the most important idea and the lowest to the least important idea. For example, if there are 8 items lettered A to H, the most important receives an 8 and the least important, a 1.

   NOTE: An alternative approach is to use the one-half-plus-one rule described in The Memory Jogger [Ref. 1, p. 71]. When there is a list with many items to rank, you may want to limit the number of items to consider. Team members then rank one-half the number of items on the list plus one. For example, if there were 20 items on the list, team members would rank 11 ideas. The most important item receives the highest value—in this case, 11.

● **Collate the rankings.** The facilitator transcribes the team members' rankings onto a chartpack, writing each number next to the corresponding idea.

● **Add the rankings.** The facilitator adds the numbers across. The idea with the highest point total is the one of most importance to the whole team. It is the highest priority item.

● **Rewrite the list.** The facilitator rewrites the list of ideas in the order of their importance to the team.

● **Perform a sanity check.** Does the prioritization make sense?

NGT Part II - Make the Selection

- Assign letters to ideas

- Rank ideas independently

- Collate the rankings

- Add the rankings

- Rewrite the list in priority order

- Perform a sanity check

DECISION-MAKING TOOLS   VIEWGRAPH 15

Can we see some examples of how NGT works?

Let's look at some examples to illustrate this process.

NGT EXAMPLE 1:   A team is struggling with some problems in the workplace. The members performed NGT Part I which identified the following issues:

   A. Ineffective organizational structure

   B. Poor communications outside the office

   C. Lack of training

   D. Poor communications within the office

   E. Unclear mission and objectives

   F. Poor distribution of office mail

   G. Lack of feedback on reports to management

The team has some opinionated members who think they know the most important problem. Several team members, however, are not vocalizing their position. You decide to use NGT Part II to prioritize the issues.

Each team member writes the letters A through G on a piece of paper. Then, each member ranks each issue from 1 to 7 (with the most important receiving 7 and the least important receiving 1), using each number only once. The results can be summarized as shown in Viewgraph 16.

Using NGT, the issues were prioritized as shown in Viewgraph 17. The issue the team will tackle first is item E, unclear mission and objectives.

NGT Example 1
Results

Issue	PO1 JONES	MAJ SMITH	SGT ABLE	MR GOOD	ENS FELLER	Total	Priority
A	7	5	1	6	5	24	2
B	2	1	6	3	2	14	6
C	6	4	5	4	4	23	3
D	1	2	3	2	3	11	7
E	5	6	4	5	6	26	1
F	3	3	2	7	7	22	4
G	4	7	7	1	1	20	5

DECISION-MAKING TOOLS   VIEWGRAPH 16

NGT Example 1
Prioritization

E. Unclear mission and objectives

A. Ineffective organizational structure

C. Lack of training

F. Poor distribution of office mail

G. Lack of feedback on reports to management

B. Poor communications outside the office

D. Poor communications within the office

DECISION-MAKING TOOLS   VIEWGRAPH 17

NGT EXAMPLE 2: Why is our ship dragging anchor in heavy weather?

The CO of a guided missile cruiser has tasked the XO to meet with the department heads and the leading Boatswain's Mate in charge of the Sea and Anchor Detail. The group is to determine why the ship has dragged anchor the last three times it was anchored in heavy weather. The CO wants to know, in priority order, what the possible causes of this problem are.

The group came up with the following possible reasons using NGT Part I:

Haven't set the anchor properly

Not enough chain out

Bottom not assessed properly for holding characteristics

Ship isn't steaming at anchor to relieve strain

Piling too much anchor chain on the flukes

Inadequate navigational fixes to determine when dragging anchor

Quartermasters not notifying Command Duty Officer (CDO) of changes in the weather (winds increasing) early enough

The Weapons Officer asserts very strongly that the primary cause is that there is not enough chain out. However, the rest of the group continues to discuss some of the other issues. The XO decides to use NGT Part II to prioritize the list for the CO.

The XO assigns identifying letters to the possible reasons that were listed and everyone in the meeting ranks them. The summary is shown in Viewgraph 18. The XO reports the prioritized list to the CO.

NGT Example 2
Ranking and Prioritization

RANKING:

A. Haven't set the anchor properly   6, 7, 6, 4, 4, 7, 4 = (38)

B. Not enough chain out   5, 5, 7, 5, 5, 6, 7 = (40)

C. Bottom not assessed properly   7, 6, 5, 6, 7, 5, 6 = (42)

D. Ship isn't steaming at anchor properly   1, 1, 1, 2, 1, 2, 1 = (9)

E. Piling too much anchor chain on the flukes   2, 2, 4, 3, 3, 3, 3 = (20)

F. Inadequate navigational fixes   3, 4, 3, 7, 6, 4, 2 = (29)

G. QMs not notifying CDO of weather changes   4, 3, 2, 1, 2, 1, 5 = (18)

PRIORITIZATION: C, B, A, F, E, G, D

DECISION-MAKING TOOLS   VIEWGRAPH 18

How can we practice what we've learned about NGT?

Two exercises follow which will give your team an opportunity to practice NGT. There are no correct answers. The results you'll get depend on the knowledge and experience of your team.

NGT EXERCISE 1: A ship received a message from the Battle Group Commander regarding the degraded state of readiness of its fire control systems. The message requested a prioritized list of probable causes for this situation within 24 hours. The ship's XO called a meeting of the Weapons Officer, the Fire Control Officer, and their senior enlisted technicians to discuss the problem and develop the prioritized list. The group defined the issue as:

> Why are the fire control systems operating in
> a progressively degraded state of readiness?

They generated the following list of possible reasons using NGT Part I:

Lack of key technicians

Deployed without critical test equipment

Deficiency of on-board critical spare parts

Inadequate overhaul funding precluded reliability upgrade modifications

Inadequate technical manual support

Inadequate engineering technical support

Scheduling of maintenance periods inadequate

Acting as the XO (team leader), lead an NGT session to prioritize these ideas for presentation to the CO.

● List these ideas on a chartpack.

● Assign sequential letters to the list of ideas.

● Distribute paper to the team members and ask them to rank the items in order of importance giving the most important the highest number value (7) and the least important the lowest value (1).

● Collect the sheets and write each numerical ranking on the chartpack next to the applicable item.

● Add up the rankings for each item and use the totals to determine the highest priority items.

NGT EXERCISE 2: A new Aviation Maintenance Officer (AMO) checked into a squadron which had failed its last two corrosion control inspections. The AMO got the squadron's shop heads together to identify and prioritize the possible causes for the inspection failures. They defined the issue as:

Why have we failed our last two corrosion control inspections?

They identified the following causes using NGT Part I:

Lack of painting facilities

Untrained junior personnel assigned to the corrosion control work center

Aircraft not removed from the flight schedule for sufficient periods for phased maintenance

Incomplete documentation of work completed

Frequent rotation of personnel in corrosion control work center

Lack of personnel for assignment to work center

Too much salt in the air

Deployment of aircraft to ships

Lack of a MOS/NEC for corrosion control specialist

Overload of operational commitments precludes normal maintenance schedules

The AMO realized that the list of 10 causes might be too long and suggested that the team reduce it. The authors of two of the ideas—"Too much salt in the air" and "Deployment of aircraft to ships"—realized that these are issues which the team could not change and withdrew them.

The AMO thought the remaining list of eight items was still too long and decided to apply the one-half-plus-one rule to make it more manageable.

Acting as the AMO (team leader), conduct an NGT Part II session to prioritize the remaining items on the list. Apply the one-half-plus-one rule to determine how many items each team member should rank. Then follow the process you have learned to identify the highest priority items before going to the see the Operations Officer to discuss the removal of aircraft from the flight schedule for phased maintenance.

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Tools for Making Decisions

- Multivoting

  \> Reduces long lists of ideas

  \> Identifies important items

- Nominal Group Technique

  \> Generates ideas

  \> Prioritizes items

What Is Multivoting?

A group decision-making technique used to reduce a long list of items to a manageable number by means of a structured series of votes.

Benefits of Multivoting

- Reduces a list

- Prioritizes a list

- Identifies important items

Multivoting Procedures

Step 1 - Work from a large list

Step 2 - Assign letter to each item

Step 3 - Vote

Step 4 - Tally the votes

Step 5 - Repeat

Multivoting Rule of Thumb

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5 or fewer	0, 1, or 2 votes
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more than 15	4 or fewer votes

Multivoting Example
First Vote Tally

I	A. No agenda	I	I. Problems not mentioned
IIII	B. No clear objectives	₦	J. Interrupted by phone calls
II	C. Going off on tangents	II	K. Few meaningful metrics
I	D. Extraneous topics	IIII	L. Interrupted by visitors
II	E. Too many "sea stories"	II	M. No administrative support
₦I	F. Vital members missing from meeting	IIII	N. Meetings extended beyond allotted time
₦₦	G. Not enough preparation for meetings	IIII	O. Members distracted by pressing operations
IIII	H. Too much "dog and pony"		P. Unclear charts

Multivoting Example
Second Vote Tally

卌   B.   No clear objectives

卌   F.   Vital members missing from meeting

卌   G.   Not enough preparation for meetings

卌   H.   Too much "dog and pony"

|||| J.   Interrupted by phone calls

||| L.   Interrupted by visitors

|| N.   Meetings extended beyond allotted time

||| O.   Members distracted by pressing operations

Multivoting Exercise 1

SIGNS OF FEAR IN THE WORKPLACE

a. Flooded with detail
b. "Don't rock the boat"
c. Mixed messages
d. Attacks/defensiveness
e. People afraid to say "I don't know"
f. Chronic indecision
g. "This too shall pass"
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i. Withholding information
j. Changing subject
k. Self-protective behaviors
l. Hidden agenda syndrome
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o. We vs. they
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u. Isolation
v. Micromanaging
w. Goals without a plan for achieving them
x. Blame others
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z. Resistance to new knowledge
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ae. Lack of new ideas
af. Fear that some work can be done by fewer people
ag. Resistance to change
ah. Avoidance of risk-taking
ai. "Just doing my job"
aj. Stress
ak. Recurrent absenteeism
al. Widespread dissatisfaction
am. Deadline anxiety
an. Enforcement approach to rules
ao. Turnover of creative thinkers

Multivoting Exercise Tally Sheet

A _____   M _____   Y _____   AK _____

B _____   N _____   Z _____   AL _____

C _____   O _____   AA _____   AM _____

D _____   P _____   AB _____   AN _____

E _____   Q _____   AC _____   AO _____

F _____   R _____   AD _____   AP _____

G _____   S _____   AE _____   AQ _____

H _____   T _____   AF _____   AR _____

I _____   U _____   AG _____   AS _____

J _____   V _____   AH _____   AT _____

K _____   W _____   AI _____   AU _____

L _____   X _____   AJ _____   AV _____

Multivoting Exercise 2

Voting Information

Petty Officer Smith	A, B, D, I, N, R
Mr. Avery	C, D, I, N, Q, R
Lt. Tam	B, J, L, N, R, Q
Ms. Matsumoto	A, C, D, I, N, R
Sgt. Bedsole	E, G, L, N, P, Q
Petty Officer Browne	C, E, H, K, M, O

Multivoting Exercise 2
Tally Sheet

A = II   G = I   M = I

B = II   H = I   N = ⊬H

C = III   I = III   O = I

D = III   J = I   P = I

E = II   K = I   Q = III

F = 0   L = II   R = IIII

What Is Nominal Group Technique?

A weighted ranking method that allows a group to generate and prioritize a large number of issues within a structure that gives everyone an equal voice.

Benefits of Using NGT

- Reduces the number of issues

- All team members participate

- Rank orders items

NGT Part I - Define the Issue and Generate Ideas

- Define the issue

- Generate ideas

- Collect ideas

- Clarify ideas

- Combine ideas

NGT Part II - Make the Selection

- Assign letters to ideas
- Rank ideas independently
- Collate the rankings
- Add the rankings
- Rewrite the list in priority order
- Perform a sanity check

NGT Example 1
Results

Issue	PO1 MAJ JONES	SGT SMITH	MR ABLE	ENS GOOD	FELLER	Total	Priority
A	7	5	1	6	5	24	2
B	2	1	6	3	2	14	6
C	6	4	5	4	4	23	3
D	1	2	3	2	3	11	7
E	5	6	4	5	6	26	1
F	3	3	2	7	7	22	4
G	4	7	7	1	1	20	5

NGT Example 1
Prioritization

E. Unclear mission and objectives

A. Ineffective organizational structure

C. Lack of training

F. Poor distribution of office mail

G. Lack of feedback on reports to management

B. Poor communications outside the office

D. Poor communications within the office

NGT Example 2
Ranking and Prioritization

RANKING:

A. Haven't set the anchor properly   6, 7, 6, 4, 4, 7, 4 = (38)

B. Not enough chain out   5, 5, 7, 5, 5, 6, 7 = (40)

C. Bottom not assessed properly   7, 6, 5, 6, 7, 5, 6 = (42)

D. Ship isn't steaming at anchor properly   1, 1, 1, 2, 1, 2, 1 = (9)

E. Piling too much anchor chain on the flukes   2, 2, 4, 3, 3, 3, 3 = (20)

F. Inadequate navigational fixes   3, 4, 3, 7, 6, 4, 2 = (29)

G. QMs not notifying CDO of weather changes   4, 3, 2, 1, 2, 1, 5 = (18)

PRIORITIZATION: C, B, A, F, E, G, D