Capstone Design Team Formulation Exercise

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This exercise is provided to give you some insight into things to consider when forming design/implementation teams. The content of this document, the method used, and the survey are taken from the book "Teamology: The Construction and Organization of Effective Teams" by Douglass J. Wilde of Stanford University. His book, published by Springer-Verlag London Ltd. in 2009, ISBN 978-1-84800-386-6, can be accessed for free via the SpringerLink portal accessible through the University of Alberta library web site.

> *Adding a few people who know less, but have diverse skills,*
> *actually improves the group's performance.*
> – James Surowiecki, The Wisdom of Crowds, 2004

The approach here uses Jung's cognition theory and a variation of the Myers-Briggs Type Indicator (MBTI) to look at an individual's "modalities". Having these modalities covered by a formed group has proven to lead to improved performance and better learning. Most individuals naturally operate in one or two areas, shown in Table 1.1, below, taken directly from the book.

Table 1.1 Jung's cognitive modes

Extraverted Sensing *ES* **EXPERI-MENT**	Extraverted iNtuition *EN* **IDEATION**	–	Extraverted Thinking *ET* **ORGANI-ZATION**	Extraverted Feeling *EF* **COMMU-NITY**
Introverted Sensing *IS* **KNOW-LEDGE**	Introverted iNtuition *IN* **IMAGI-NATION**	–	Introverted Thinking *IT* **ANALYSIS**	Introverted Feeling *IF* **EVALUA-TION**

INFORMATION COLLECTION DECISION-MAKING

Complete the questionnaire on the next page to find out where you prefer to operate!

Circle zero, one or two alternatives for each of 20 questions.

Be careful with signs!

Energy Direction: Outward or Inward

EI1	You are more:	(e)	sociable	(i)	reserved
EI2	You are more:	(e)	expressive	(i)	contained
EI3	You prefer:	(e)	groups	(i)	individuals
EI4	You learn better by	(e)	listening	(i)	reading
EI5	You are more:	(e)	talkative	(i)	quiet

El difference: Σe – Σi = El_____

Orientation: Structured or Flexible

JP1	You are more:	(j)	systematic	(p)	casual
JP2	You prefer activities:	(j)	planned	(p)	open-ended
JP3	You work better	(j)	with pressure	(p)	without pressure
JP4	You prefer:	(j)	routine	(p)	variety
JP5	You are more:	(j)	methodical	(p)	improvis-ational

JP difference: Σj – Σp = JP_____

Information COLLECTION process: Facts or Possibilities

SN1	You prefer the:	(s)	concrete	(n)	abstract
SN2	You prefer:	(s)	fact-finding	(n)	speculating
SN3	You are more:	(s)	practical	(n)	conceptual
SN4	You are more:	(s)	hands-on	(n)	theoretical
SN5	You prefer the:	(s)	traditional	(n)	novel

SN difference: Σs – Σn = SN_____

DECISION-making process: Objects or People

TF1	You prefer:	(t)	logic	(f)	empathy
TF2	You are more:	(t)	truthful	(f)	tactful
TF3	You see yourself as more:	(t)	questioning	(f)	accommo-dating
TF4	You are more:	(t)	skeptical	(f)	tolerant
TF5	You think judges should be:	(t)	impartial	(f)	merciful

TF difference: Σt – Σf = TF_____

Compute and record **non-negative** scores below.

EI - JP + 2SN = ES____ EXPERI- MENT	**EI - JP – 2SN = EN ____ IDEATION**	**-**	**EI + JP + 2TF = ET ____ ORGANI- ZATION**	**EI +JP – 2TF = EF____ COMMU- NITY**
- EN = IS ____ KNOW- LEDGE	**- ES = IN ____ IMAGI- NATION**	**-**	**- EF = IT ____ ANALYSIS**	**- ET = IF____ EVALU- ATION**

INFORMATION COLLECTION DECISION-MAKING

Please note that this categorization is approximate, and indicates only affinities for the cognition modes!

Forming a group with these modes covered to varying degrees makes it more likely that when the group is presented with a problem, differing perspectives are coming into play. As we will see throughout the course, having differing perspectives is *very* important in achieving a solid, practical design.

Please detach this portion of the sheet and submit!

Name:

ID:

Modality	Your Score
ES	
EN	
IS	
IN	
ET	
EF	
IT	
IF	