What does it mean to be an ???

Empowering Statistician
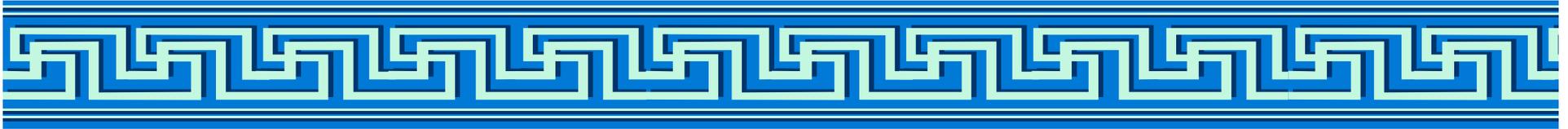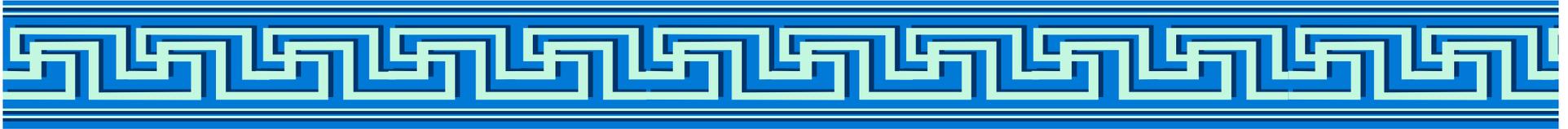
Presented at the 2006 JRC

by
Angie Patterson
GE Global Research

Outline:

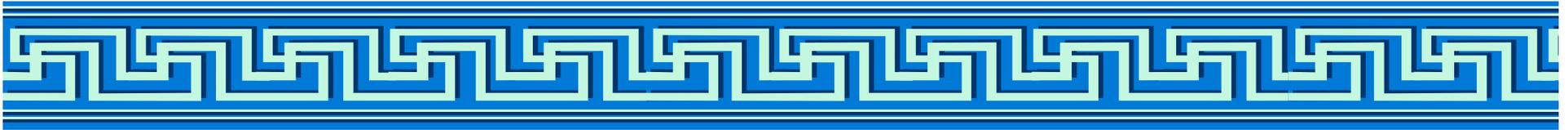- Perspectives on what it means

- An example of how we (GE) have done it
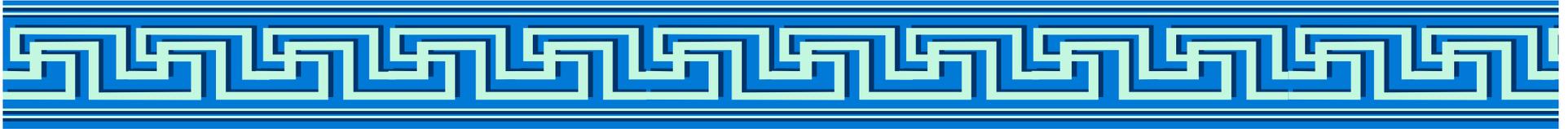
Perspectives

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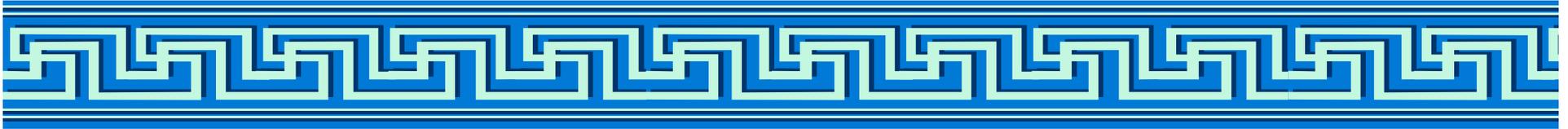
You need to be empower<u>ed</u> before you can be empower<u>ing</u>!

… can't give what you don't have!

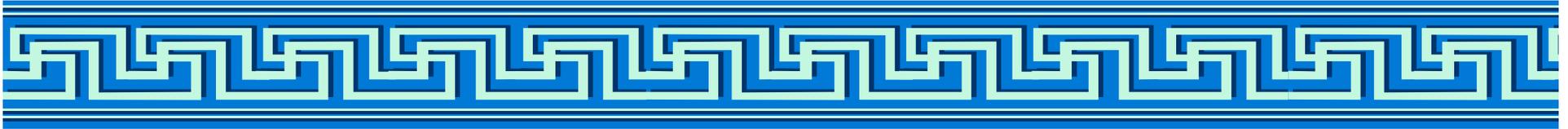# Empower<u>ed</u> Statistician…

Freed from the "consulting box", i.e., the paradigm that we work passively, waiting for someone to come to us with their problem, so that we can give them statistical advice about their problem.

imagination at work

Empower**ed** Statistician...

Behaves, and is viewed as an equal partner on projects, equally accountable for the success or failure of the project.

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Empower<u>ed</u> Statistician…

Has the option of behaving proactively to start new initiatives, or assume leadership positions on cross-functional projects involving others besides statisticians.
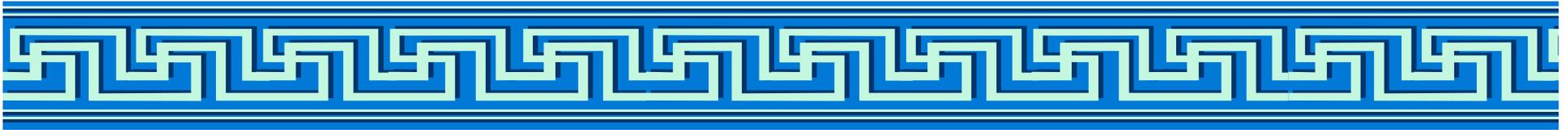
imagination at work
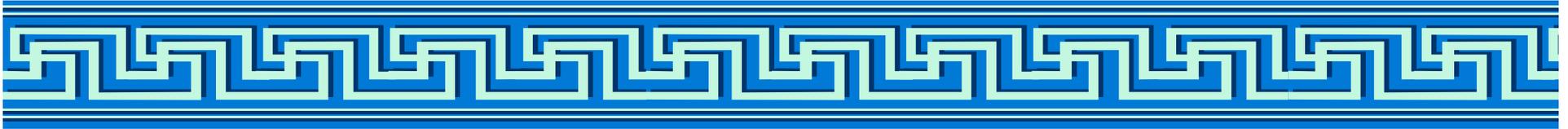
Empower**ed** Statistician…

Proactive, not passive

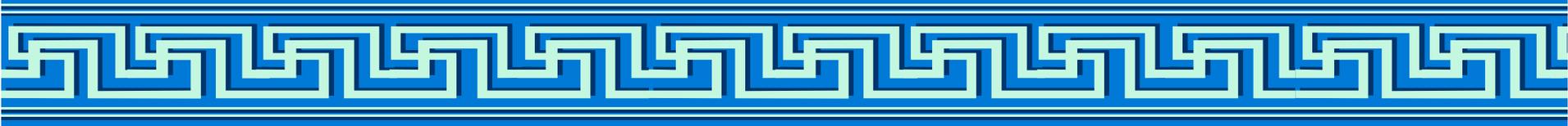Accountable, equal partner
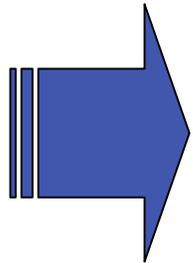
Statistical Leader

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Empower**ing** Statistician

Mentality is...

Everyone should be trained to perform the highest level statistical work for which they can be made competent.
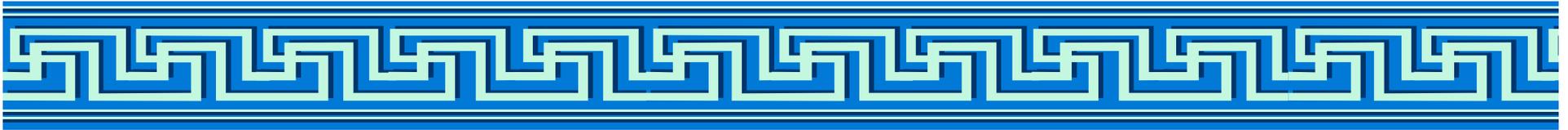
GE Global Research
2006

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What's in it for us?

More *technically sophisticated* and *strategic* statistical work for professional statisticians

- How to deploy across the organization
- Develop the organization's strategy for statistical software
- Design statistical training and development system for the organization

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Tactically...

- providing intuitive explanations, in non-statistical language

- provide guidelines for when the problem dictates that the non-statistician needs to seek advice (set them up for success)

- create & transition tools/methods that are robust and adaptable to answer a broad range of questions

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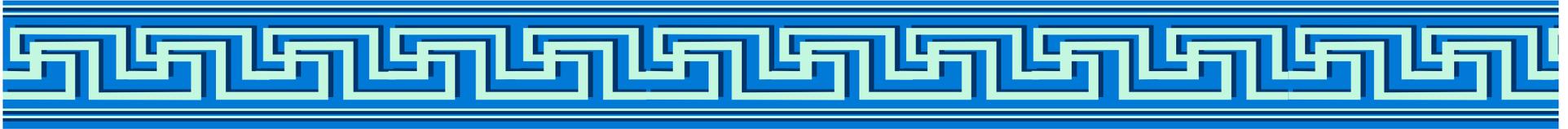
Example

Robust Design Program
for
GE Specialty Materials Business

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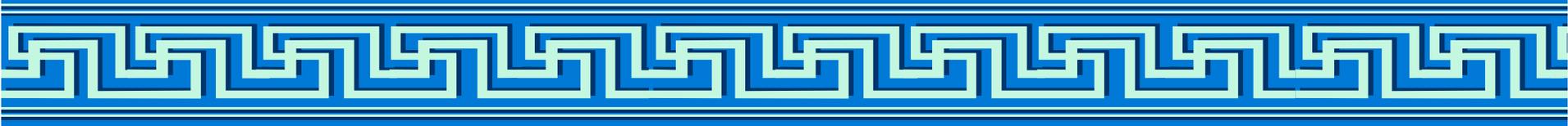
Environment:

• Close relationship (successful history) partnering on product development programs; accountability

• Respected by Technologists and their leadership team

• Six Sigma (DMAIC) implementation had matured, DFSS implementation was approx. 2 years mature
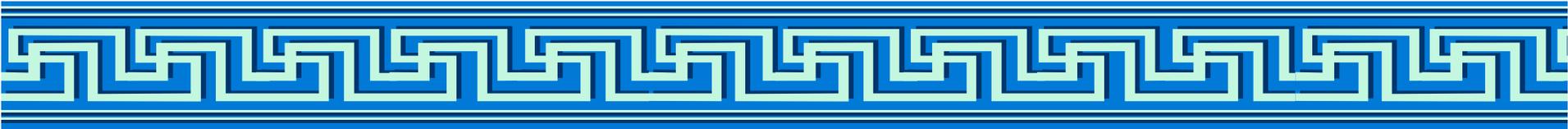
imagination at work
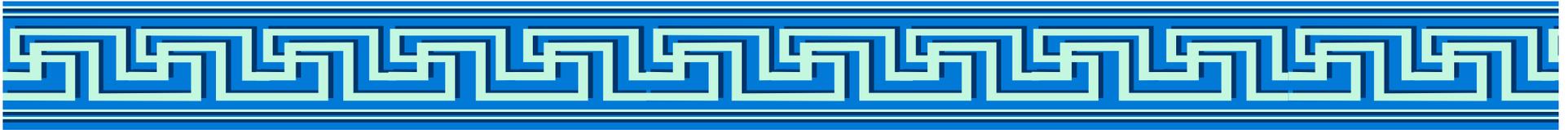
Program Development:

Approached DFSS leader r.e. the need for Robust Design, and a proposal for how to take DFSS to the next level.

Strategy for:
- Training the global organization
- Providing software for implementation
- Development of local experts
- Development of Benchmark examples

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Training strategy:

Educators

Professional Statisticians

Statisticians + Local Experts

Local Experts

Educated

| Leadership team + local experts |

| Site 1 Top Technologists | ... | Site N Top Technologists |

Rollout (waves 3+)

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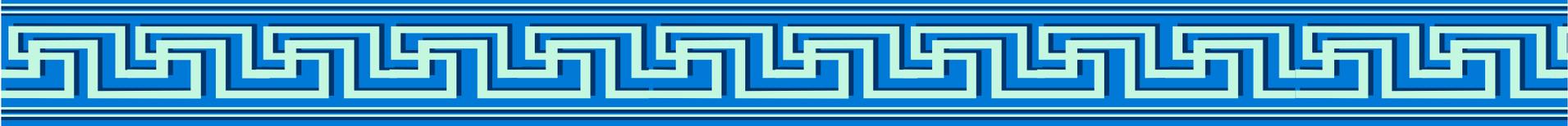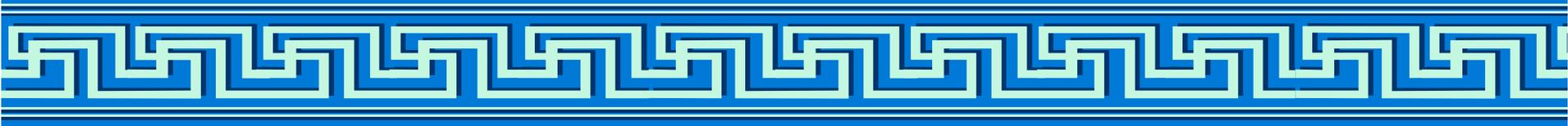
Course content/features:

- **Motivation (by example)**
- **Customer's view - <u>Think</u> variation**
- **Example based (real, relevant)**
- **Methodology – applied; assumptions**
- **Software based (tools for the methods)**
- **Hands-on: team project**
- **<u>Thinking</u> is required!**

Developing Local Experts & Benchmark examples:

- Top 3-4 product development programs the year following training

- Statisticians play mentoring role

- Sharing examples across the established network

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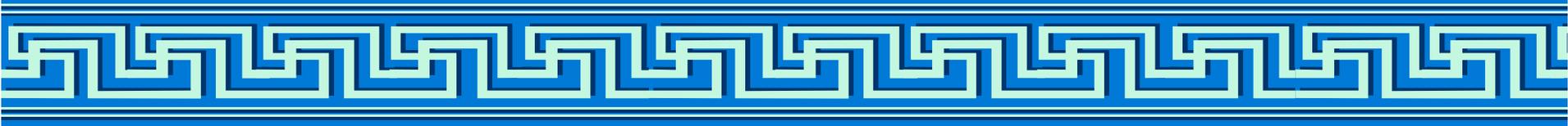
What was in it for us?

- **Technology awards from GE Specialty Materials**

- **Nomination for a prestigious GE Global Research award**

- **Time to focus on the next strategic initiative**
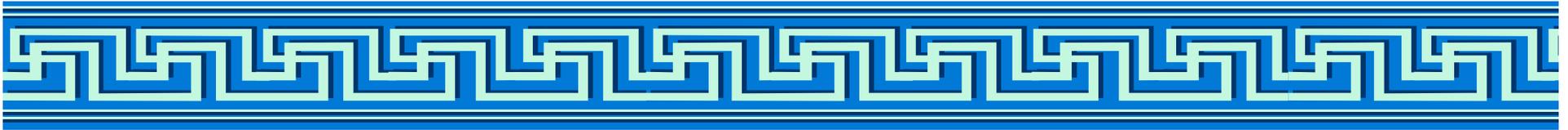
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