

Making complexity make sense

# Spherical Collaboration

A NEW WAY OF LOOKING AT WORKING TOGETHER

Deploying spherical models, metaphors,  
and processes to foster well-rounded  
communication and decision-making

# Seeing New Things in Old Ways

Human collaboration approaches and processes are playing catchup with technology.

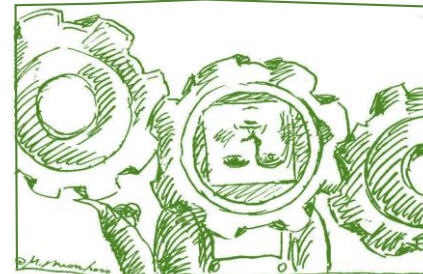
It's no secret we are still transitioning from a linear, hierarchical, mechanistic Old World to a nonlinear, interconnected, interdependent New World.

It's an understatement to say the technologies we use to communicate and collaborate have changed dramatically.

And yet, the ways we use technology to get things done together remain rooted in methods and assumptions that are legacies of the Industrial Age.

In some ways, we have been relatively slow to adapt to the speed, obstacles and conditions of the 21<sup>st</sup> century.

Outdated modes of communication and collaboration continue to create change-resistant barriers to innovation and problem-solving.



Technologically we are aware that Model Ts cannot be adapted to run on high-speed turnpikes.

Many organizations have been obsoleted by disruptive technological innovations precisely because the old models cannot be fixed, upgraded or updated.

In due course, innovative businesses and new business models have arisen to take advantage of new technologies.

Then, why is it the qualitative **ways** we collaborate – how we meet, talk, share, understand, make sense, come to agreement – are failing to keep pace with the quantitative **things** – tools and systems – we use to communicate?

The answer to the question is both simple and complex.

Simply, we have yet to change the **ways** we work together to sync with the **things** we are working with because human change always lags technological change.

The complex part is that changing our mental models to be in accord with new realities is slow and challenging.

The need to change our mental models – our worldviews – is the problem beneath the problem.

**“When you change the way you look at things, the things you look at change.” -Max Planck**



# Making Sense, Seeing Anew

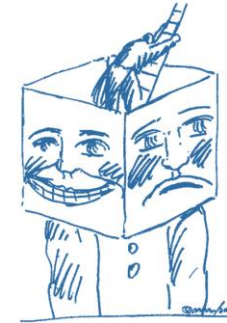
We need to transition our mental and graphical models from Old World to New World.

Mental models are internal representations of the external environment that we develop over time to make sense of everything.

Mental models shape our behaviors, guide our actions and determine our approaches to solving problems.

They deeply and directly effect how we work together.

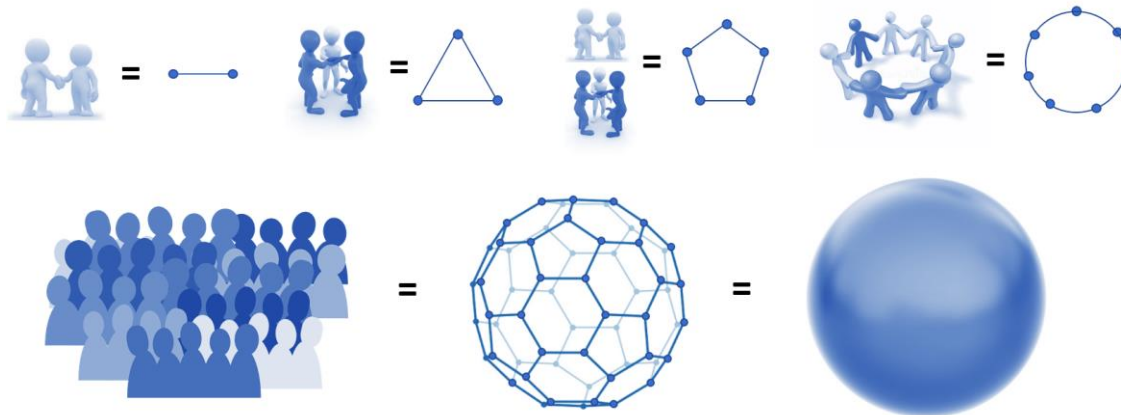
When we fail to adapt our worldviews to the changes happening around us, communication and collaboration fall out of phase with social and business realities.



**Spherical Collaboration** guides groups and individuals toward a new, adaptive way of seeing, acting and evaluating

To change the way we collaborate, we need to bring our mental models into accord with the rapidly changing world around us.

- We need mental and visual models that allow us to form shared understandings.
- We need collaboration methods and processes that create shared vision and awareness.
- We need to see and think of collaborations as holistic, dynamic systems.



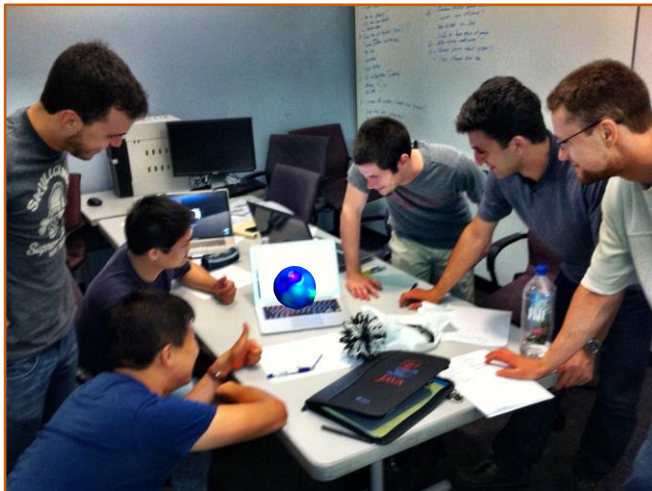
**“Mental models are deeply held internal images of how the world works, images that limit us to familiar ways of thinking and acting. Very often, we are not consciously aware of our mental models or the effects they have on our behavior.” - Peter Senge**

# Collaborating Spherically

Spherical Collaboration puts individuals and groups in sync with speed, obstacles and conditions.

Spherical Collaboration is the antithesis of the fragmented and dis-integrated approaches to problem solving and communication that handicap far too many efforts at getting things done together.

It guides individuals and groups toward “being spherical,” an internal and external way of visualizing the relational dynamics that move and shape systems.



**Seeing, thinking and acting “spherically” fosters shared vision and mutual understanding between the collaboration stakeholders.**



**To be spherical is to think, understand, strategize and act with a holistic context – an integrated perspective.**

Sphere models and processes depict a spherical web of interconnections and interactions that represents the state of the system.

Users visualize their actions, as patterns of activity and see changes in the condition (shape) of the collaboration as it develops and evolves, leading to more contextualized decision-making and more creative problem-solving.



# Seeing Spherically

The principles and approaches of Spherical Collaboration are based on the concept of Sphericity.\*

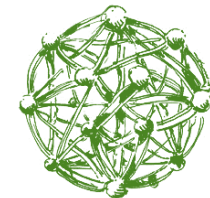


Sphericity is a holistic way to see (understand) complex systems based on the premise that everything is interconnected, interdependent, tensegral and self-organizing. The central principle in Sphericity is: “How we see the world determines how we think and act as surely as gravity rounds the planets.”

Sphericity provides a dynamic universal metaphor, language, processes, visual toolset and evaluative metrics that shift people and organizations away from a mechanistic and compartmentalized old-world mindset toward seeing all systems as constantly changing dynamic patterns (spheres).

## Spherical Principles

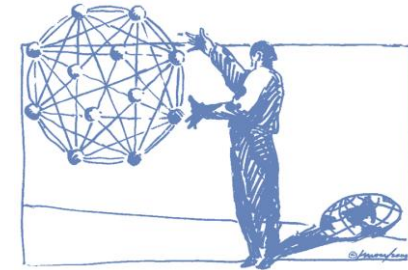
1. Everything is a sphere, and all spheres connect at any scale. “Everything is a part, nothing is apart.”
2. All spheres embody smaller spheres and are integral systems within larger spheres.
3. Seeing spherically means understanding systems as holistic, complex patterns of dynamic relationships.
4. The desired goal and metric for all systems is to achieve *spherical integrity*.
5. Spherical integrity results when all elements in a system are linked and dynamically harmonic.
6. Spherical integrity is dependent on the strength, number and energy dynamics of interconnections.
7. All systems are continuously reshaped by changes in connections and energy flow between connections.
8. Changes in the shape of one sphere change the shapes of all other interconnected spheres.
9. Disconnection, fragmentation and other deficiencies in the system deform the shape of the system.
10. A cohesive, well-rounded spherical system is flexible, adaptable, responsive and resilient.
11. There are no perfect spheres.



\*Sphericity was first introduced in 2004 in *Being Spherical: Reshaping Our Lives and Our World for the 21<sup>st</sup> Century*.

# The Collaboration Sphere

The Collaboration Sphere\* is a mental and graphical model that depicts collaborations and goals as dynamically changing spheres.



The Collaboration Sphere taps our innate ability for collective visual pattern recognition and group-based metaphorical expression. It the interactions during a collaboration using shape (pattern) as a evaluative metric.

The model allows stakeholders to visualize the interconnections, interdependencies and interrelationships that shape activities such as strategic planning, teambuilding, project management and leadership development.

## How It Works

The Collaboration Sphere depicts systems as irregular 2D circles and 3D spheres that exhibit variable degrees of roundness.

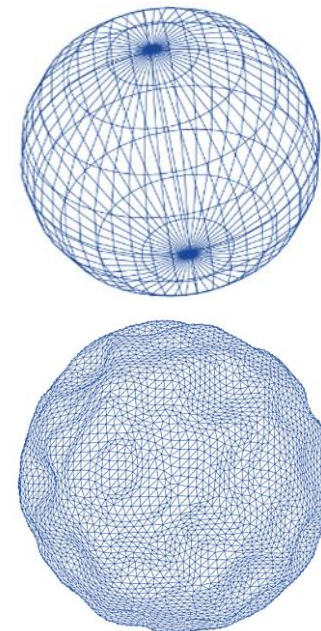
A perfectly round sphere represents an ideal system or activity. Deviations from total roundness indicate areas in the system that are not meeting the expectations of the stakeholders – disagreements, misunderstandings, objectives falling short.

Patterns of shrinking and warping alert stakeholders to weaknesses or failures in achieving progress or meeting goals.

Color patterns also depict the relative condition of the collaboration.

The changing shape of the sphere can be viewed as a representation of the past, current or projected state of the collaboration and its goals.

Powerfully, the sphere depicts a fusion of objective and subjective evaluation to form a complete picture of the collaboration dynamics.



**\*The Collaboration Sphere model, tools and processes are based on the 2D & 3D curvilinear graphing system known as the Spherical Modeling Tool (SMT).**

# 21<sup>st</sup> Century Data Visualization

Visualization tools developed for managing factory operations are still widely used for understanding modern complex systems.



Many of the visualization tools we use routinely – bar charts, pie charts, Gantt charts, line graphs, gauges – have passed their 150<sup>th</sup> birthdays.

They were created in analog times to manage analog processes and systems.

Which is not to say we have not been rapidly evolving data visualization methods.

In response to the limitations of traditional graphical approaches, we are using new visualization technologies to explore new ways to understand, navigate and communicate information.

We probe data for information we know we need and for insights we didn't expect to find.

Efforts include sophisticated network simulations, GIS tracking, mapping and animations. Most recently, augmented reality (AR) and virtual reality (VR) have been added to the data analytics toolkit.

To generate meaningful, actionable insights, viewing data in new ways is not sufficient.

We also need new ways to conceptualize and understand systems.

The models we create on the screen need to sync with the models we see in our heads. The pictures we look at need to harmonize with our internal concepts of the way things work.

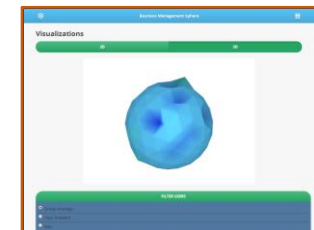
The Spherical Collaboration Model is unique in its ability to integrate quantitative data with qualitative evaluation.

The literal presentations of graphical data and evaluations depicted in the Collaboration Sphere are analogous to the interconnections, interdependencies and relationship dynamics that shape systems.

The 2D and 3D representation of information as dynamically changing spheres of interconnections and energies makes it possible to communicate deeper levels of complexity without stripping out or dumbing down the underlying data.



Old



New



# A New Collaboration Metaphor

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Spheres have been used for thousands of years to represent wholeness, completeness and integrity.



We use metaphors constantly. They are necessary in all aspects of life to help us understand processes, conditions and concepts. Without shared metaphors, individuals and groups cannot communicate effectively or pursue goals collaboratively.

The Box is a common example of a metaphor. It's used frequently to represent restricted thinking or limited perspective. We say, "Think outside the box" when we mean look further, break free of convention, get unstuck.

The Sphere is the metaphorical opposite of The Box.

As a metaphor for collaboration, The Sphere represents change, progress, vision and wholeness. It provides context that allows us to approach decision-making and problem-solving in new ways.

The Sphere helps us explore what we have yet to discover or understand about the work we are doing together and about each other.



## The Collaboration Sphere:

- Represents systems in their entirety and encompasses all subsystems.
- Has no pre-conceived meanings to misdirect understanding between stakeholders.
- Derives meaning from a fusion of quantitative and qualitative input.
- Retains relevancy across boundaries of culture, language, age and education.
- Is shaped by the perceptions, beliefs and assumptions of the participants.

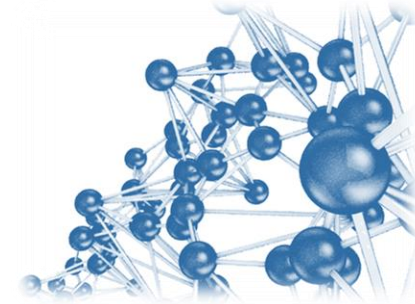
**Well-rounded - On a roll - Bouncing back - In good shape - In bad shape - Shaping up - Inner circle  
In the loop - Sphere of activity - Sphere of influence - Circle of friends - Circle of life**

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# The Collaboration Continuum

The Collaboration Sphere defragments and integrates communication by creating a visual continuity of activity and assessment.



In complex, decentralized organizations, where managers and teams have high levels of autonomy, stakeholders in the system need to see the context of their decisions, not merely operate according to sectionalized plans.

Discontinuities in perception and communication lead to fragmentation, siloization and compartmentalization.

The Collaboration Sphere reunifies.

The Collaboration Sphere is not one sphere but many nested and interconnected spheres that depict a continuum of awareness and understanding – a shared vision.

The Collaboration Sphere Continuum provides both a visual and linguistic aid – a perceptual assist – that unifies the communication processes from conception to completion.

Shared visual continuity allows individuals and groups to track progress and conditions across sectors of activity.

Stakeholders literally see what shape the collaboration is in, their relation to it and their influence on it.

## Connecting the Dots

Shared vision

Collective seeing

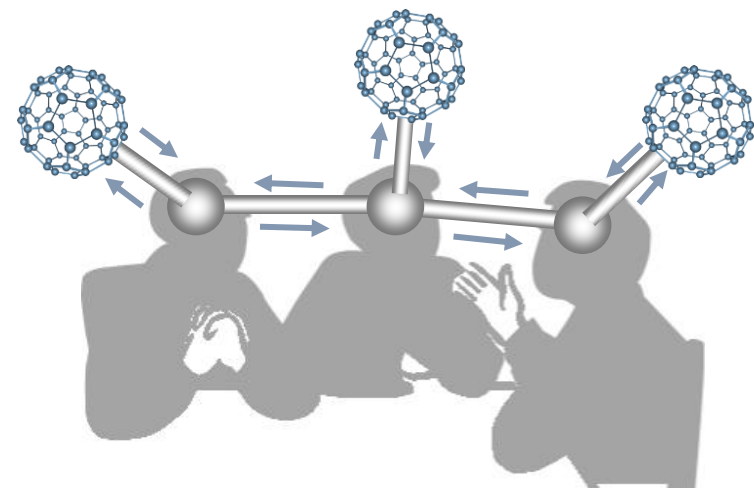
Group sensemaking

Local and non-local sharing

Collaborative decision-support

Holistic, contextual understanding

Dynamic system and project evaluation



# Spherical Continuity

The model and metaphor represent collaborations as one sphere made up of many different spheres of activity.

The Collaboration Sphere Continuum links projects, departments and other organizational functions by consistently using the same visual and verbal reference to reflect the current state in each area of influence.

Individual spheres of activity interconnect to form the organization's primary sphere. The data and activities from the nested spheres feed back into the primary sphere to depict the overall shape of the organization.



A Needs Assessment Sphere depicts the group-identified needs of the whole organization.



A completed Needs Assessment Sphere becomes the foundation for developing a Strategic Plan Sphere.



The Strategic Plan Sphere morphs into projects that are managed and evaluated using Project Spheres.

# The Collaboration Sphere Model

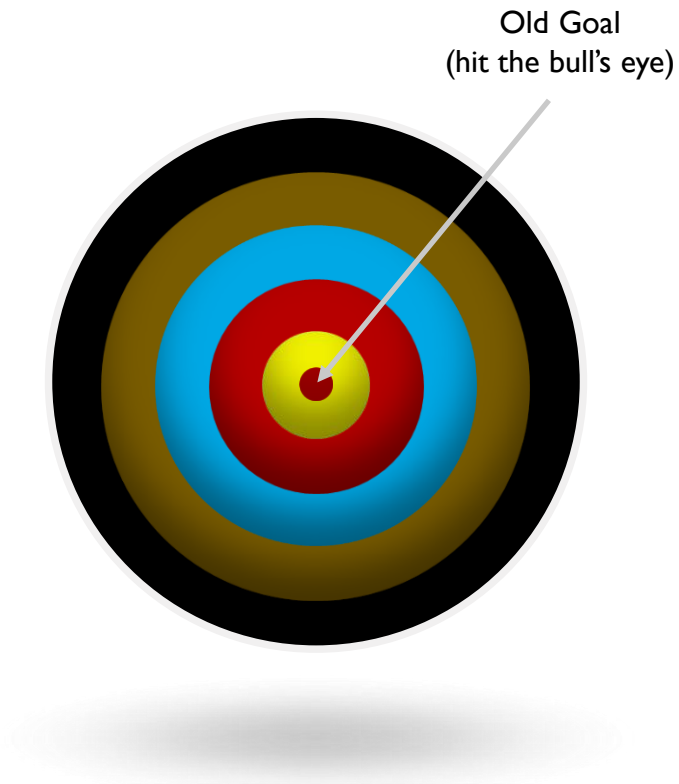
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Seeing the shape of a collaboration

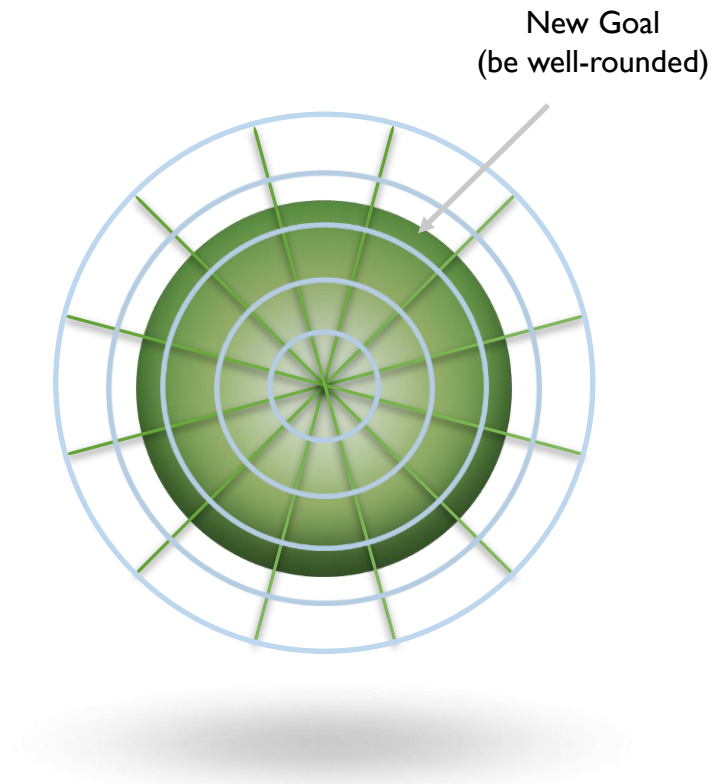




## Targeted vs. Spherical



**The Collaboration Sphere counters the tendency of individuals and organizations to focus narrowly on goals and objectives.**



**The goal, visually and conceptually, is to achieve a well-rounded collaboration in which the various influence factors are operating synergistically.**



# Achieving Spherical Integrity\*

An ideal collaboration is interconnected, integrated and interdependent.

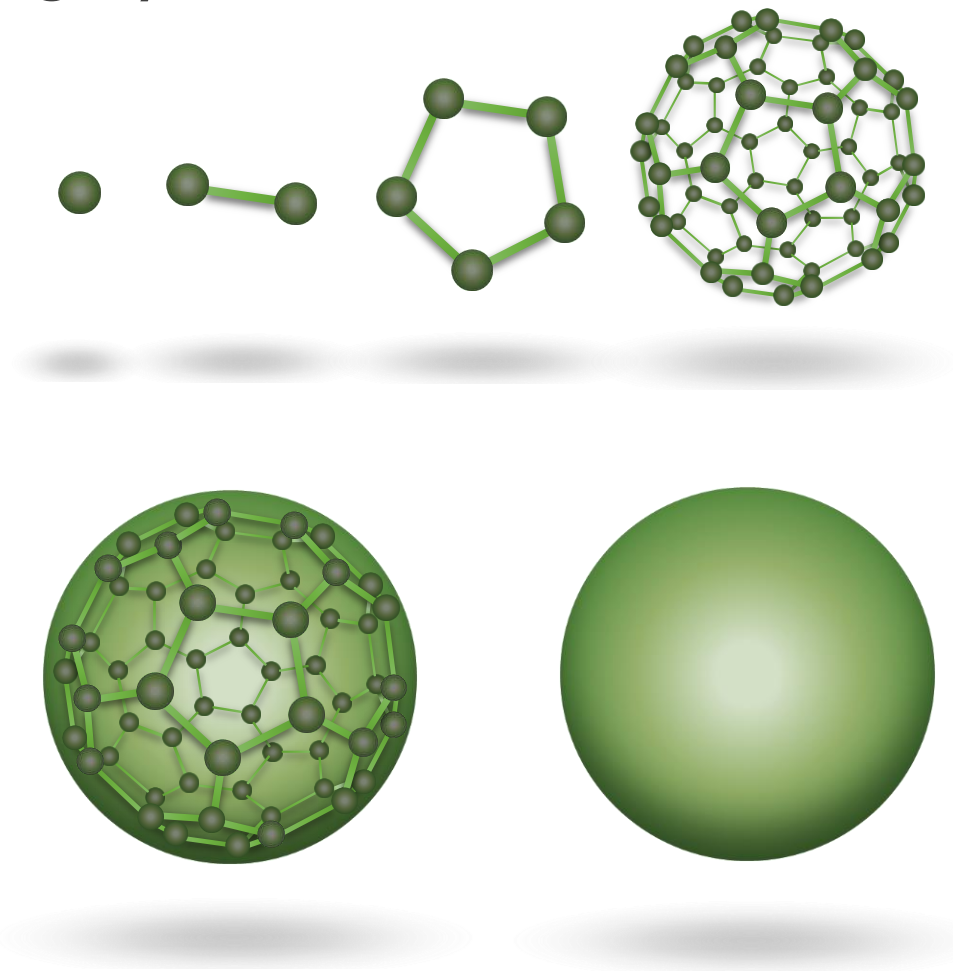
The Collaboration Sphere provides an integrative and holistic approach to understanding, planning, comparing and evaluating systems by depicting systems as a spherical shape formed by interconnected nodes.

The nodes represent elements, such as clarity, understanding, direction, respect and other factors that influence the health and condition of the activity.

Every node in the system is directly or indirectly connected to every other. Connections in the model represent the relationships – the energy flow and communication dynamics – between nodes.

The nodes in the system are interdependent. They function together to shape the collaboration. Nodes are also, to some degree, self-organizing – connections form, strengthen and weaken without centralized control.

**\*A system with spherical integrity results when elements of the collaboration are well-connected, form strong bonds and exhibit an energetic exchange of information and ideas.**



# Using Shape as a Communication Metric

Using the Collaboration Sphere requires minimal orientation and training.

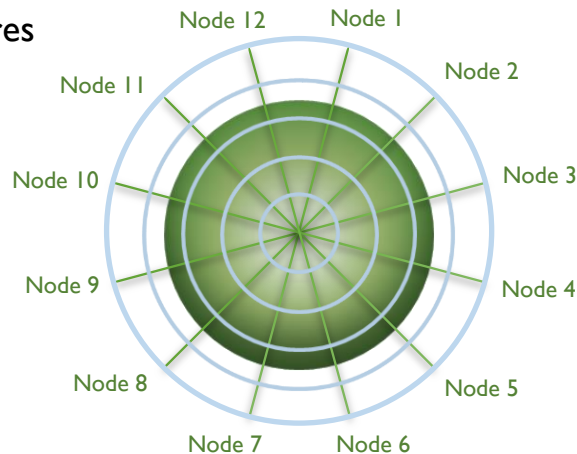
The operational view of the Collaboration Sphere depicts influence factors (nodes) arrayed around a circle, which is a 2D representation of the sphere.

The nodes are plotted on a closed curvilinear graph. The number of nodes depicted depends on the number of influence factors in the system and varies with the size of the system and the visual display area.

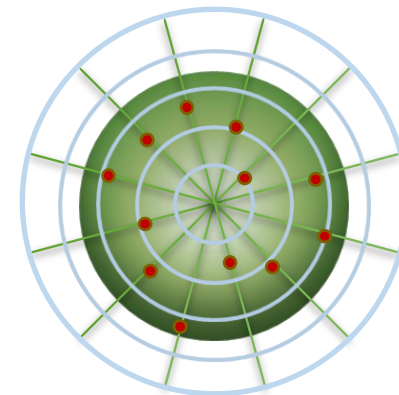
Users input objective and subjective evaluations for each factor using an adjustable data scale. The assessment scale measures the condition, or state, of the system.

Evaluation data can be entered directly into the sphere model or imported automatically from other sources.

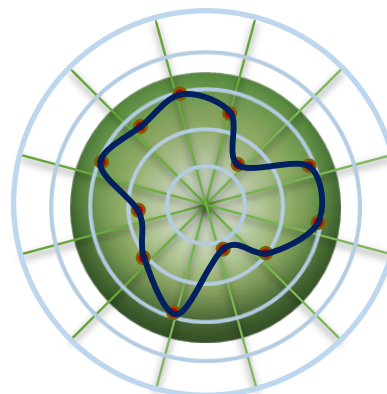
A healthy and robust system appears mostly spherical. A system with weak or missing connections appears shrunken and misshapen.



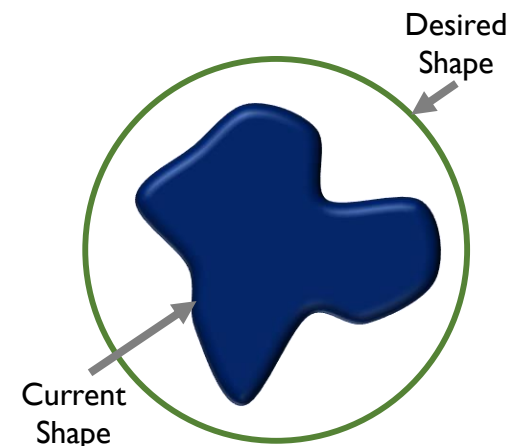
**Array the Influence Factors**



**Enter the Values**



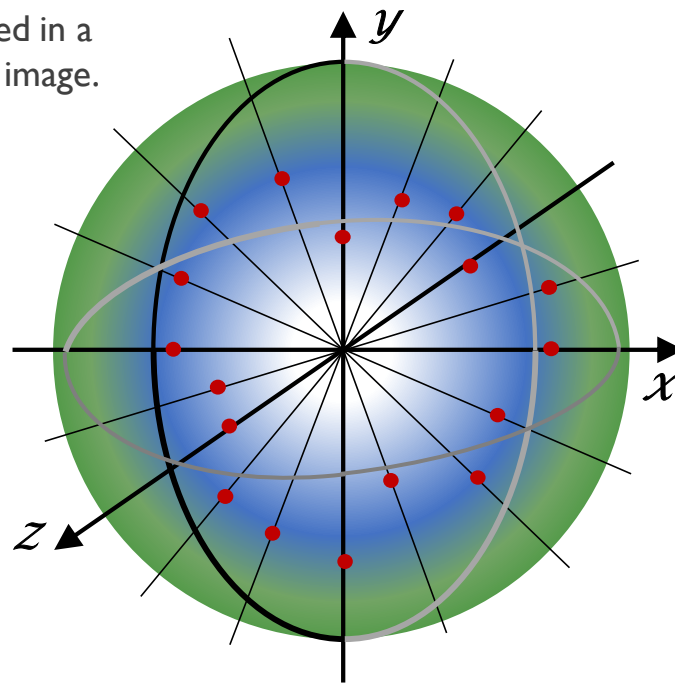
**Connect the Dots**



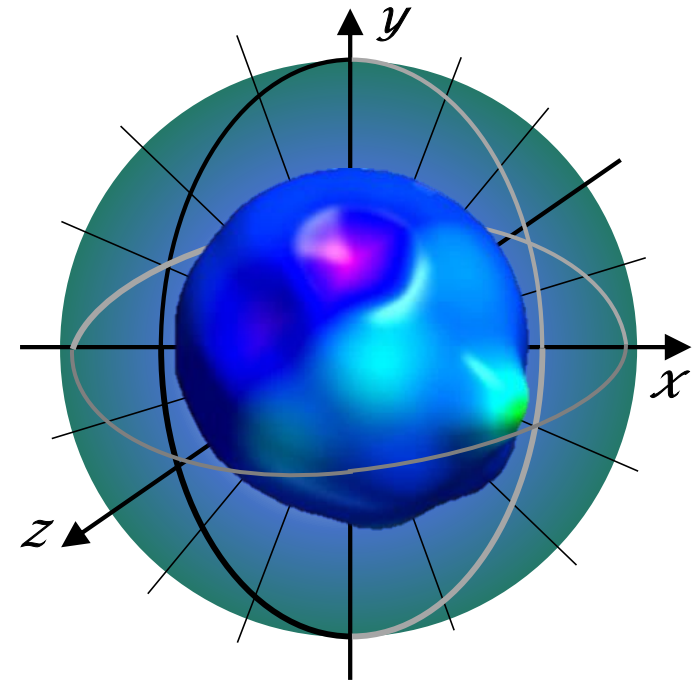
**Evaluate the Shape**

## Seeing Collaboration in 3D

The condition of the system is conveyed in a single, integrated image.



In 3D view, values are plotted on the x, y, and z axes, creating a spatial orientation that shows the interrelationships between the influence factors.



The evaluations appear as indentations and protrusions in the sphere. Users see the condition (health) of the system in one integrative visual.

The resulting shape reveals areas of progress or deficiency. Dents and shrinkage reveal trouble areas. Bumps represent areas that are exceeding expectations.

**Are we satisfied with the shape we are in right now? What do we have to do to become more well-rounded?**

# Spheres within Spheres

Every collaboration is system within a system. Every collaboration is a node in a larger sphere.

Everything in a system connects. All connections contribute to the integrity of the overall system.

Attempting to model every link creates an indecipherable web of connections. Removing information tends to oversimplify the system and its dynamics.

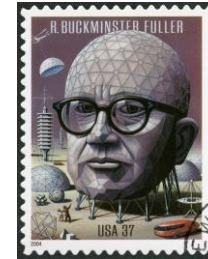
The Collaboration Sphere allows for the depiction of varying levels of complexity by depicting collaboration activities as nested nodes and spheres.

In the model, every node is a sphere. Every sphere is a node. Users are able to drill down from the top level of the primary sphere into any node, or sub-sphere.

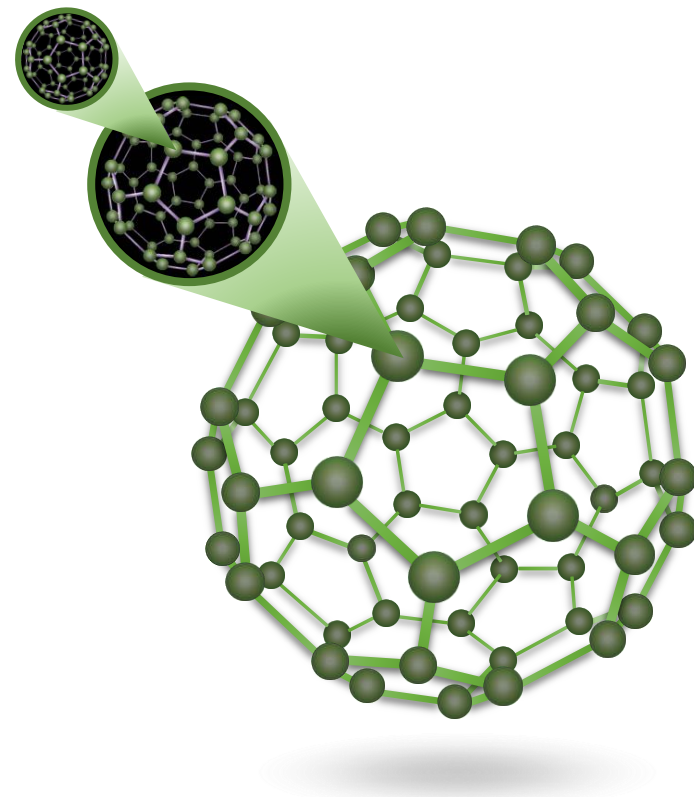
Nested spheres can contain any type of information, including management structure, statistics, performance evaluation, market data, progress reports, and more.

The depth of the Collaboration Sphere for a given activity depends on the volume and complexity of the representative data.

There are no theoretical limits on the number of sphere levels that can be incorporated into the model.



**Everything is a system.  
There are no non-systems.**  
- Buckminster Fuller



**When looking at the topmost or deepest level, the data always represent the state of the entire system.**



# Professional Association Trial Study

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Applying the Collaboration Sphere model  
and processes for organizational  
development, management and evaluation



# Developing the Sphere of a Professional Association

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Faster and more efficient development processes require goal-formation, discerning context, and remembering why missions matter to be rapid and simultaneous.

Recognizing the need to be more agile, robust and resilient in the face of dramatic changes in the health market, a professional healthcare association in British Columbia initiated a long-term effort to reinvent and “re-shape” their organization.

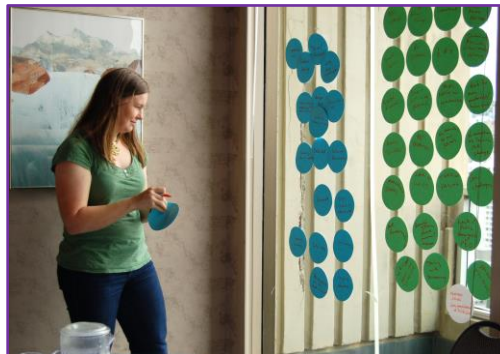
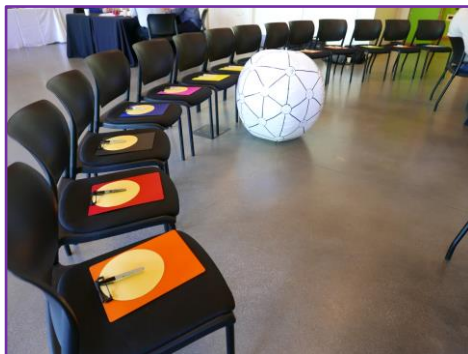
Working with an outside consultant, the association adopted the Collaboration Sphere models and processes to facilitate the group’s long-term transformation process.

Interviews, polls and team assessments revealed shortcomings in the areas of management, governance, communication, funding, membership, and the association’s ability to represent its professional members when negotiating with provincial government agencies.

The development team identified a need to integrate the various stages of organizational development and promote more effective communication and collaboration within the widely distributed membership base.

The 1.5-year organizational development effort included needs assessment, strategic planning, project management, leadership skills development, collaboration training and performance evaluation.

The Collaboration Sphere and spherical processes became integral to the five-year strategic plan, which involves the pursuit of 18 organizational initiatives designed to transform the association as it adapts to changes in the healthcare field.





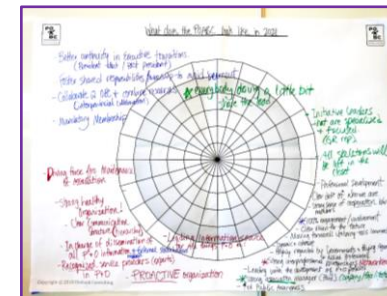
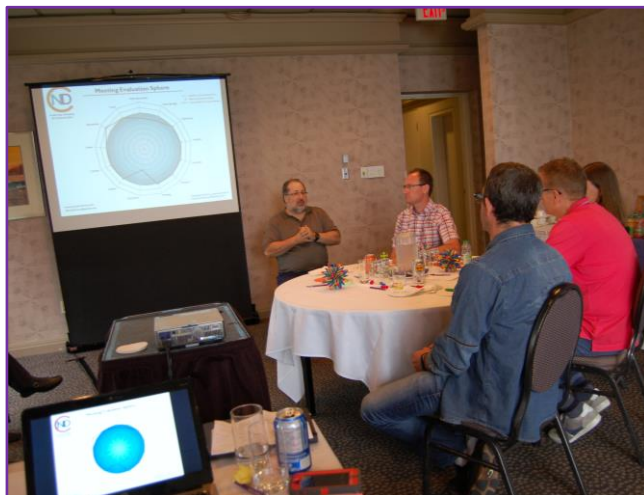
# Spherical Needs Assessment

The team used a series of sphere models to create a visual, contextual reference for decisions, actions and evaluation.

The development effort began with a comprehensive needs assessment.

A small group of association leaders initiated the process by collaboratively creating an association Needs Sphere that depicts a textually and graphically unified vision of the organization.

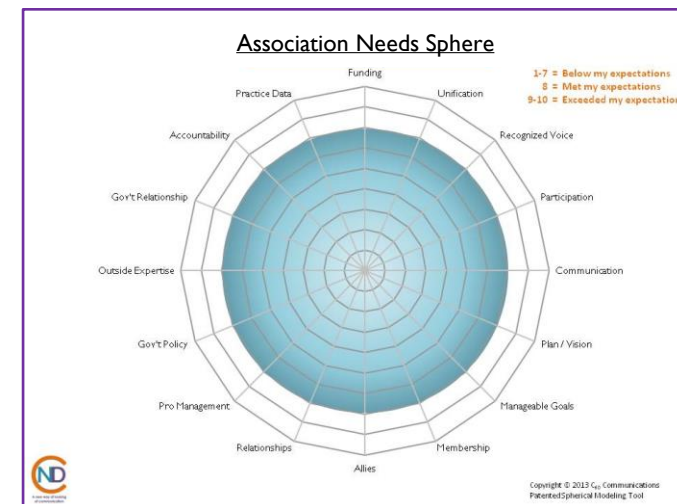
A modified SWOT assessment combined with spherical processes identified core needs, which were inserted as nodes of influence on the sphere model.



The team spent two days in Vancouver, B.C., refining their model in a series of ideation sessions and game-based team-building exercises.

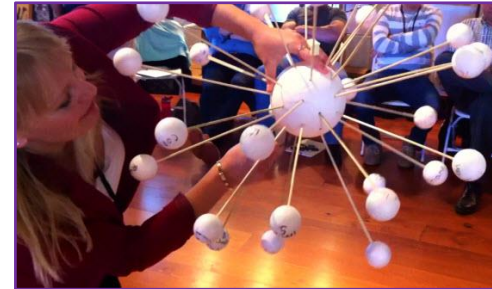
The spherical processes revealed fundamental differences in the needs of association stakeholders as well as frustrations with earlier efforts at reorganization.

The final Needs Sphere helped the team see what shape they are in now and compare it to what shape they would like to see for the organization in the future.



## Tensegrity\* Sessions

Spherical processes helped the members make connections with one another and discover their deep interdependencies.



In the second phase of their reorganization, during the group's annual meeting, the association convened 26 members for a series of co-creative and collaborative tensegrity\* sessions.

The participants spent half a day expanding and refining the Needs Sphere to reflect the perspectives of the diverse group of stakeholders in attendance.

The series of exercises identified additional needs, revealed a range of strengths and weaknesses, and produced a list of potential solutions to existing problems and desired changes.

The group tensegrity exercises brought to the surface the importance of thinking about the association in new ways and of developing new operational methods, attitudes and behaviors.

Spherical visual representations of the organization and the exercises created sensemaking continuity and group awareness that will be carried forward into further development efforts.

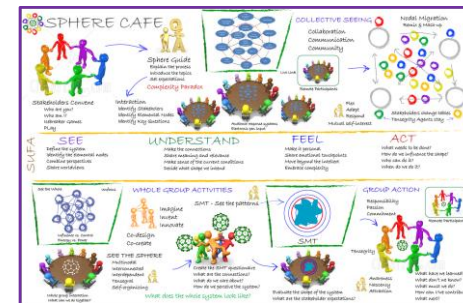


**\*Tensegrity, as it is used in spherical modeling, refers to the tension and compression – give and take, push and pull – dynamics that shape individuals, groups and organizations.** <https://en.wikipedia.org/wiki/Tensegrity>



# Spherical Strategic Planning

The steering committee advanced visually and spherically from needs assessment to the development of a strategic plan.



In the third phase of spherical organization, a 14-person association steering committee met for three days to develop a strategic plan based on the needs identified in the first two sessions.

During the session, the Needs Sphere evolved into the Strategic Plan Sphere, which was adopted by the planning committee as the visual guide and progress evaluation tool for long-term planning and operations.

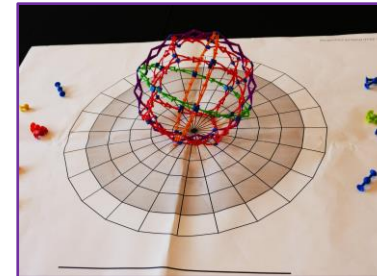
The Strategic Plan Sphere provides a way to look at all of the goals of the association in a single, integrated view. It visually demonstrates that all aspects of the association are interconnected and interdependent.

By keeping an eye on the "big picture", association leaders, project teams, association members and allied stakeholders see what "shape" the association is in at any given time as they collaborate to prepare for the future.



# Spherical Project Management

The Collaboration Sphere allows project teams to compare quantitative and qualitative data in a unified visualization.

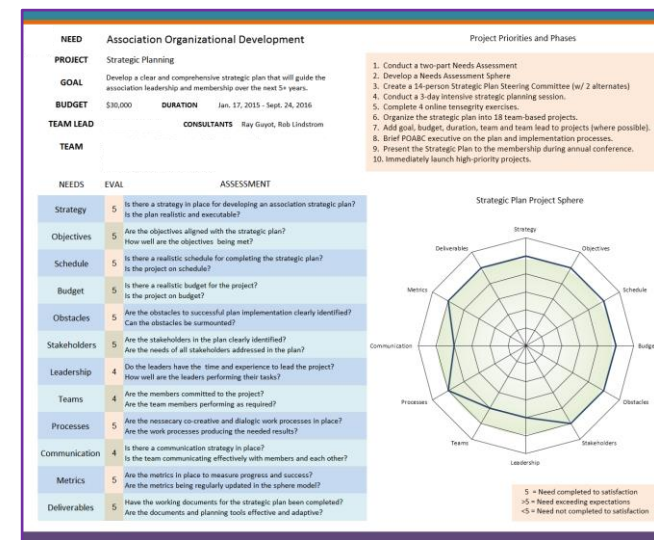


In the fourth phase of spherical organization, the Strategic Plan Sphere evolved into a series of interconnected sphere models that each represent a variety of team projects.

The Project Spheres allow team members to see the condition – progress, strengths, weaknesses – of their projects and to share their evaluations with the association executive board and membership.

Deformations in the shape of the project spheres show managers and team members where to focus their attention, while keeping the whole system in view.

As with the needs assessment and strategic plan spheres, the goal is to integrate the actions of team members and, ultimately, make the projects as well-rounded as possible.



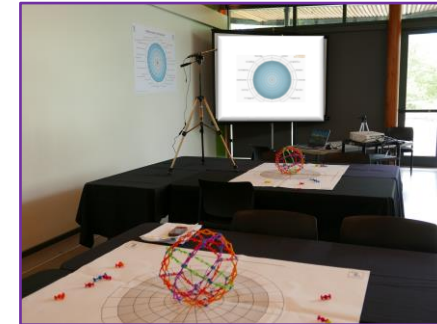
# The Association Primary Sphere

The Collaboration Sphere provides a visual core that integrates the ongoing stages of association development

As the project spheres progress, the evaluations change the shape of the Association Primary Sphere, creating a continuity of understanding among association executives and teams of the current state of the organization.

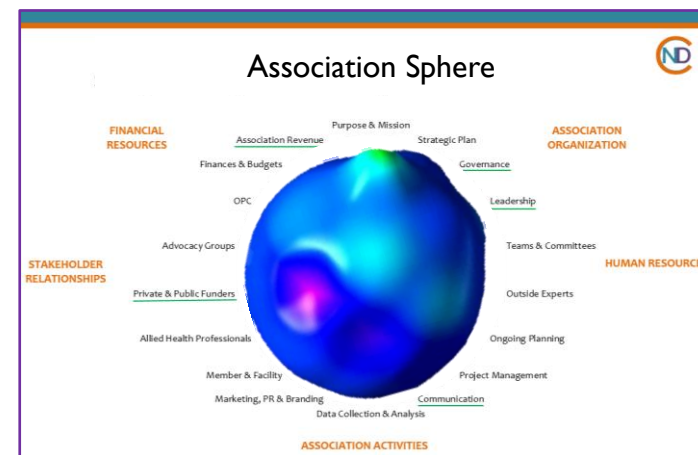
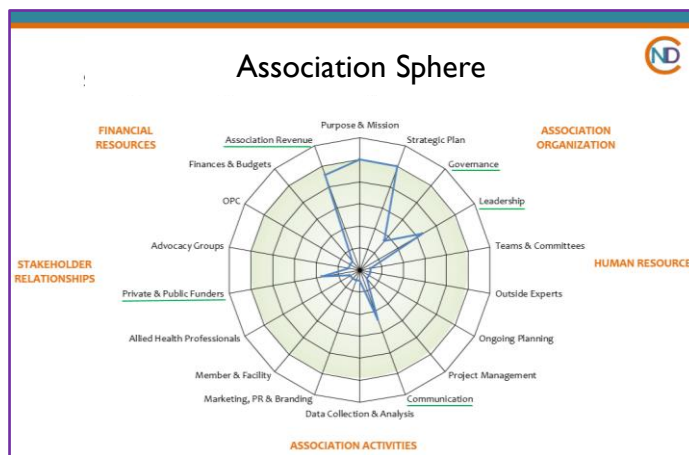
Conversely, the primary sphere links back to the current state of the project activities and their logged data.

To promote transparency, the association publishes the primary sphere on the organization's website to allow all members to see the progress of the projects and their impact on the whole organization – the big picture.



The 18-month spherical organization development effort – from needs assessment to strategic planning to project management – resulted in a new way of looking at the association, its mission and the work that needs to happen in order to meet the group's newly defined short-term and long-term goals.

The association continues to use the primary sphere, the individual project spheres and spherical processes to guide the organization in its transformation into a more robust and effective professional association.





# The Value of Spherical Collaboration

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Helping individuals and organizations transition out of old models and mindsets and into a new, adaptive way of seeing thinking, acting and evaluating





## Why Spherical?

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The primary purpose of the Collaboration Sphere is to guide decision-making and problem-solving.

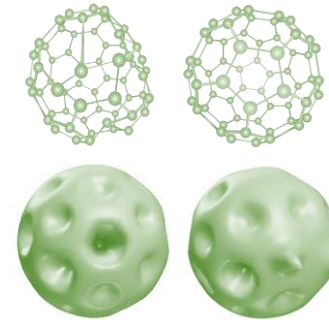
**Assist** organizations in the alignment of vision, mission, goals, strategy, structure, processes and resources.

**Provide** visual continuity (a continuum) for performance and system assessment.

**Add** a third dimension of organizational awareness lacking in other graphical organizational development and management systems.

**Enhance** the development of collaboration and co-creation skills and communication capacities.

**Reveal** where other business tools, techniques and processes are working and where they are failing.



The unifying image of a sphere is easy to comprehend and share because everyone knows when round is round.

**Depict** aspects of the organization and activities that are not easily revealed using traditional models and methods.

**Integrate** other methods, tools and processes within the unifying sphere model.

**Serve** as a system-wide communication platform for sharing the condition and dynamics of the organization with stakeholders inside and outside the business.

**Present** a picture of varied perspectives, where they conform and where they diverge, as the precursor to innovation and creativity

**Adapt** to other change processes and organizational development practices without the need for expert users or consultants.

**Improve** and increase organizational flexibility, awareness, resilience and responsiveness.

**Make sense** of organizational structure, leadership style, management practices and team behaviors.

## CONTACT INFORMATION

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# The Collaboration Sphere

[NeedsDriven@gmail.com](mailto:NeedsDriven@gmail.com)