

# **REPORT**

## **STRATEGIC PLANNING for ACS Committee on Chemical Safety (CCS)**

**October 26, 2014**

**Prepared for:**

**Bob Hill  
and  
The CCS Leadership Team**

**By  
Amber Hinkle and Kathleen Schulz**

## Table of Contents

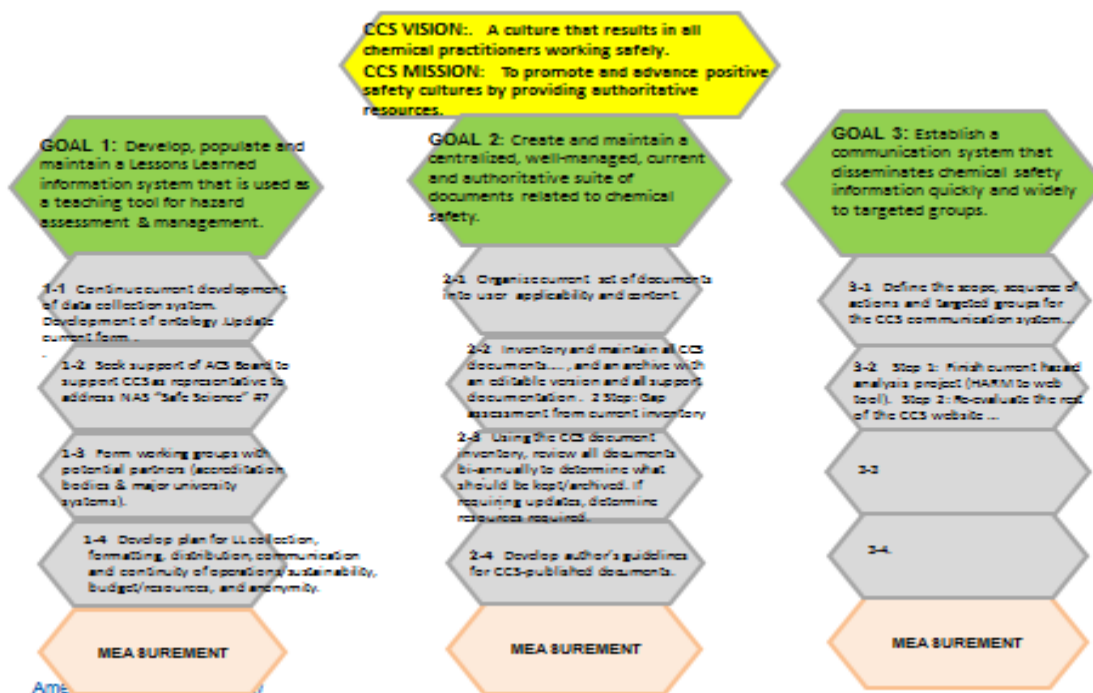
- A. Executive Summary
  
- B. Report
  - 1. Background
  - 2. Approach
  - 3. Mission and Vision
    - i. Mission
    - ii. Vision
  - 4. Current Situation
    - i. Environmental Scan (STEP)
    - ii. Challenges and Opportunities Analysis (TOWS)
  - 5. Goals
    - i. Process Overview
    - ii. Results
  - 6. Strategies
    - i. Process Overview
    - ii. Results
  - 7. Implementation
    - i. Pitfalls
    - ii. Next Steps
  
- C. Appendix
  - 1. Pre-work Input
  - 2. Proposed Goals with Vote Tallies
  - 3. Proposed Strategies with Vote Tallies
  - 4. SMART Criteria
  - 5. Project Plan Template
  - 6. Original Flipcharts from Retreat

## Executive Summary

This report contains results of a facilitated Strategic Planning Retreat for ACS Committee on Chemical Safety (CCS), held in Washington, DC, on October 3-5, 2014.

The body of this report presents key outcomes from the retreat, e.g., final decisions and action items. The Appendix contains supporting information e.g., pre-work, intermediate steps and actions, and information which may be useful to guide actions after initial implementation.

The resulting CCS Strategic Plan for 2014-2015 is:



# REPORT

## 1. Background

The ACS Committee on Chemical Safety (CCS) held a Strategic Planning Retreat in Washington, DC, on October 3-5, 2014. The retreat was facilitated, and used ACS LDS™ methodology, as taught in the ACS Strategic Planning Workshop. The planning methodology was reviewed with participants at the beginning of the workshop. Facilitators then guided participants in applying the strategic planning concepts to the CCS situation. Facilitators were Amber Hinkle and Kathleen Schulz.

Ten people from CCS participated in the retreat, as follows:

### *Retreat Participants*

Harry Elston

David Finster

Scott Goode

Bob Hill

Bettyann Howson

Kim Jeskie

Kyle Strode

Ralph Stuart

Erik Talley

Marta Gmurczyk, ACS Staff Liaison

## 2. Approach

CCS's strategic planning process started with information gathered in a pre-work survey sent to the entire CCS committee, as designated by the Core Planning Team (Core Team). This information was augmented by facilitator study of background materials provided by the Core Team. Other pre-retreat preparations included phone calls between the CCS Core Team and facilitators. Through these activities, retreat details were finalized, and existing information and ideas were gathered for proposed CCS mission and goals prior to the retreat.

At the retreat, the facilitators led participants through the ACS Leadership Development System™ Strategic Planning Process, as documented in the Retreat Participant Guide. Steps in the planning process, in the order covered in the retreat, were:

- Mission, Vision, Core Values
- Environmental Scan (Using STEP tool)
- Challenges and Opportunities Analysis (Using TOWS tool)
- Goals
  - Identification of Preliminary Goals
  - Down-selection (via weighted voting)
  - Checking Down-Selected Goals vs. SMART Criteria
  - Opportunity Mapping
  - Final Goal Selection
- Strategies
  - Identification of Strategies for Final Goals (Brainstorm)
  - Down-selection (via weighted voting)
  - Checking Goal/Strategy Statements vs. SMART Criteria
  - Opportunity Mapping
  - Final Goal/Strategy Selection for 2014-2015
- Implementation Planning
  - Identification of Champions
  - Kickoff Date Selection
  - Next Steps

### 3. Mission and Vision

#### a) Mission

At the retreat, facilitators presented collated pre-work input on proposed mission statements (see Appendix), plus the current mission statement from CCS website. Retreat participants reviewed and discussed the information presented and agreed on the following mission statement:

#### ***CCS Mission Statement – October, 2014***

To promote and advance a positive safety culture by providing authoritative resources.

#### b) Vision

In a similar manner, retreat participants discussed and agreed on the following vision statement.

#### ***CCS Vision Statement – October, 2014***

A culture that results in all chemical practitioners working safely

## 4. Current Situation

Prior to considering goals, participants analyzed CCS's current situation by structured brainstorming for Environment Scan (STEP Tool) and Challenges/Opportunities Analysis (TOWS Tool). These tools provided categories for brainstorming, to ensure focus and that nothing was missed. The resulting data were used as reference points for the retreat discussions.

### a) Results of CCS's Environment Scan (STEP):

#### Social

- Negative view public has about chemicals, reinforced by daily events (media-driven) (N/A)
- Perception of chemistry = explosions (Educators use this to engage) (O)
- Developed a risk-averse society rather than risk-managed (T)
- Instant gratification (T)
- Multicultural/international differences in experience & values (O)
- Different size organizations (resources vary) (O)
- Safety not valued – not articulated as an ACS core value (T)
- Safety seen as interfering with success (T)
- Awareness of safety is increasing (O)
- Culture in PI (individual practitioners')

#### Technological

- Online courses with no hands-on labs
- Information is easy to distribute
- "Crappy resources out there"
- No basis to recognize whether information is good or bad
- People want to get information themselves, no help...and then they are "experts"
- Comfort with technology increasing (people are dependent on it)
- No validation of information or applicability of information to task
- Lack of critical thinking, do not question resources and information
- Data rich/ but structure poor

#### Economic

- Economic and environmental costs of safety practices
- Cost of publications is decreasing (due to electronic media)
- Cost (of expertise) to do EHS well is high; cost is front-loaded
- Federal funding decreases put constraints on institutions
- More reliance on contingent labor (e.g., contact/temporary labor, grad students..)
- May need more CCS administrative support from ACS
- Corporate instability shortens planning horizons
- Cost overrides quality, compromising safety (e.g. colleges may shift to virtual labs to decrease costs)
- Some recognition that safety "pays"

#### Political

- Other ACS governance units' lack of knowledge or questionable commitment to safety
- Anti-regulation push
- Regulatory jargon/confusion, doesn't answer practical safety questions
- Competing regulatory expectations (OSHA, EPA, other agencies)
- Could "liaison" better with outside organizations (e.g., AAAS, etc)
- Move toward consensus standard-making rather than regulators

## b) Results of CCS's Challenges and Opportunities Analysis (TOWS):

### External Threats

- Risk-averse society rather than risk-managed
- Instant gratification
- Safety not valued – not an ACS core value
- Safety seen as interfering with success
- Online courses with no hands-on labs
- Information is easy to distribute
- “Crappy resources out there”
- People want to get information themselves, no help...then believe they are experts
- Comfort with technology increasing/people are dependent on it
- Lack of critical thinking, don't question resources and information
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### External Opportunities

- Perception of chemistry = explosions (Educators use this to engage)
- Multicultural/international differences in experience & values
- Different size organizations (resources vary)
- Awareness of safety is increasing
- Culture in PI (individual practitioners') world varies
- Information is easy to distribute
- No basis to recognize whether information is good or bad
- People want to get information themselves, no help...then believe they are experts
- No validation of information or applicability of information to task
- Data rich/ but structure poor
- Cost of publications is decreasing (electronic media)
- May need more CCS admin support from ACS
- Some recognition that safety pays
- Other ACS governance units' lack of knowledge or questionable commitment to safety
- Could “liaison” better with outside organizations (e.g., AAAS, etc)
- Move toward consensus decision-making rather than regulators

### Internal Weaknesses

- Overly myopic at times
- PR/marketing for CCS and resources we provide
- Specific connection to ACS Divisions
- We're not experts in every field
- It's hard to manage our resources
- We're all volunteers (i.e., have limited time)
- Large workload with not enough resources
- Negative view of safety in general; i.e., CCS may be seen as a hindrance
- Perhaps too focused on academia
- We voice our best ideas face to face-only twice/yr
- Our output is heavily traditional; i.e., paper)
- Not enough money to do it all
- Perhaps missing K-12 teachers as a target group
- Perhaps we re-enforce chemophobia perceptions
- Limited resources for disabilities to be addressed RE safety/safety info
- Limited staff time available to help
- Working in a silo relative to ACS structure; do we have the right data?
- Limited recruiting strategy

### Internal Strengths

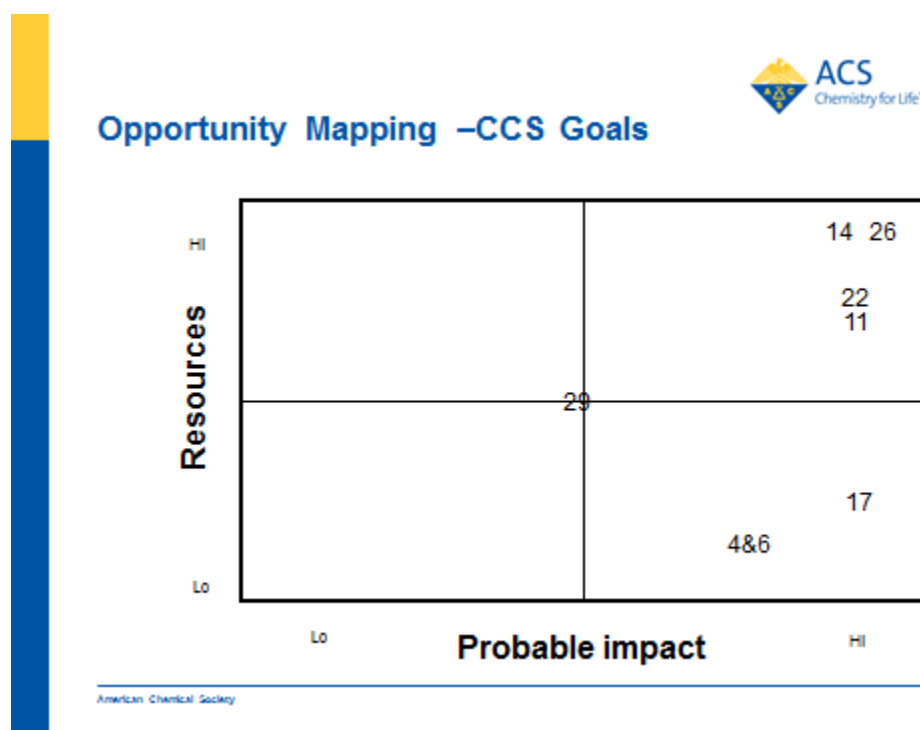
- Passion for safety
- Diversity of expertise
- Breadth and depth of chemistry and HSE expertise
- Well respected
- Strong network with other experts
- Committed, active, engaged members
- Mutual respect
- Institutional memory and longevity
- Communication skills
- Strong, excellent leadership
- Developed great inventory of resources
- Our resources and guidance are in demand
- Well connected – within ACS and outside ACS
- Do have a budget
- Good history and reputation; street cred
- Generate revenue with resources we've developed/maintained
- Recognize the seriousness of our topics; moral and ethical impacts too
- Impactful at all levels/in all aspects
- Internal validation of our strengths within ACS



## 5. Goals

### a) Process Overview

Participants started with a proposed list of twenty-nine goals (3-5 year) for CCS provided by facilitators from pre-work. The list of proposed goals was then narrowed to ten goals for further consideration via weighted voting. Next, the group refined the ten goals, combining some, restating as necessary to clarify, then made the resulting six goals SMART (see SMART criteria in Appendix). One goal (original #29) was exempted from part of this process because it was already in progress. Finally, each of the six remaining goals was ranked High-Medium-or Low, first with respect to probable impact if achieved, and second, resources required. The goals were then plotted on an Opportunity Map prior to brainstorming strategies for each goal and, ultimately, final selection of Goals/Strategies for implementation in 2014-2015.



Final selections were made after discussion of CCS's ability to accomplish each in view of resources available, CCS's capacity, and other significant factors identified in the Environmental Scan and TOWS Analysis. CCS chose to defer "no-brainers (4&6, 17) and focus on Goal #29 and three "Pursue Selectively" goals (11, 14 and 22).

A list of the twenty-nine proposed goals, with vote tallies, is given in the Appendix. After successful implementation of CCS's initial goals, it is recommended that this list be used as a starting point for discussion to select goals for future 3-5 year periods.

b) Results

The list of SMART goals, with goals chosen for focus in 2014-2015 highlighted in red, is shown below. After progress on the highlighted goals, CCS is encouraged to review and consider the list below for future committee action.

**Goal 1 (Orig. Goal #11):** Develop, populate and maintain a Lessons Learned information system that is used as a teaching tool for hazard assessment & management.

*Note: Partners needed (for \$, information)*

**Impact: High Resources: Moderate/High**

**Goal 2 (Orig. Goal # 4 & 6):** Build a working relationship with AACT, CHED, CPT and SocED that fosters collaborative projects related to safety. Offer ourselves as safety consultants.

*(Note: Measure # of collaborative projects)*

**Impact: Medium Resources: Low/Medium**

**Goal 3 (Orig. Goal #17):** Identify or create organizational management and process management tools that can be used to support a proactive safety culture in the laboratory environment.

**Impact: High Resources: Low (ID)/Medium (Create)**

**Goal 4 (Orig. Goal #14):** Create and maintain a centralized, well-managed, current and authoritative suite of documents related to chemical safety.

*Note: Urgent -retire, not, review schedule*

**Impact: High Resources: High**

**Goal 5 (Orig. Goal #22):** Establish a communication system that disseminates chemical safety information quickly and widely to targeted groups. Delivery; Advise, Counsel, Review.

**Impact: High Resources: Medium-High**

## CCS Goals (cont'd)

### **Goal 6 (Combination of Orig. Goals # 16, 26 &27, renamed as #26):**

Guide and support instructors in the development of innovative and effective chemical safety education.

**Impact: High Resources : High**

**#29:** Identify safety topics that should be taught and competencies that should be tested at the middle school, high school, undergraduate and graduate levels. Accomplish this goal within 2 yrs. **Impact: High**

**Resources: Medium**

*(Note: Since #29 was being covered by an existing Task Force, strategies were not brainstormed during the retreat. Instead participants were asked to send suggestions/input to Bob Hill prior to the retreat focused on this topic, scheduled for November, 2014.*

## 6. Strategies

### a) Process Overview

Participants brainstormed strategies for the three SMART goals chosen for 2014-2015, as described in Section 5 of this report. Then, a process analogous to that employed for goals (also described in Section 5) was used to down-select to 2-4 strategies for each goal. Weighted voting, H-M-L ranking, opportunity mapping and discussion of CCS's resources and capabilities was used to select Goal/Strategy combinations for implementation in 2014-2015.

A list of all strategies considered for CCS's chosen goals, with voting tallies, is included in the Appendix. After successful implementation of the strategies chosen for 2014-2015, it is recommended that this list be used to choose additional strategies for implementation beyond the initial 6-12 month period.

Champions, responsible for completing and leading execution of a project plan or recruiting someone to do so, were identified for each Goal/Strategy combination, as shown immediately below. A template for project planning is included in the Appendix. The project planning template also appears in the Retreat Participant Guide.

Champions List for CCS Strategies:

**NEXT STEPS for GOAL/STRATEGIES:**

**KICKOFF : October 2014**

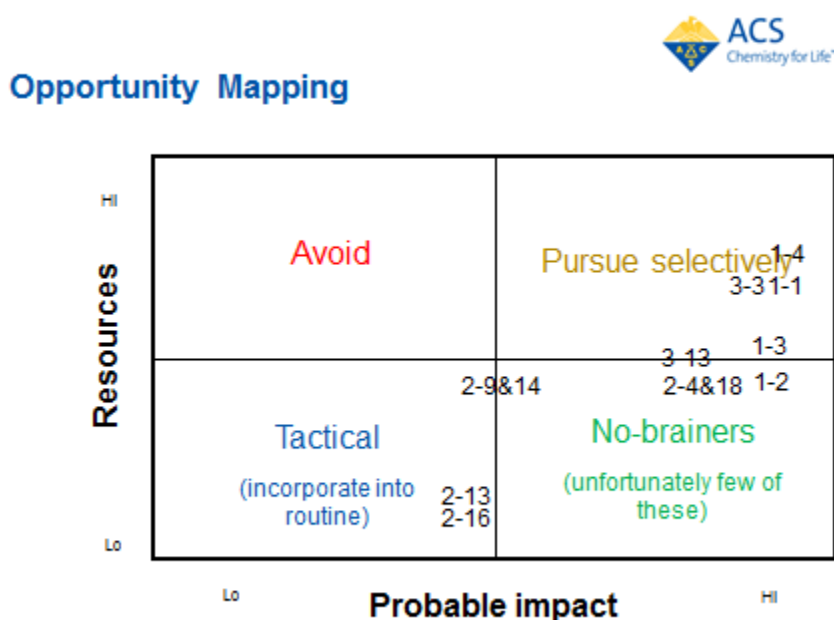


What	Champion	When
Goal 1, Strategy 1	Ralph Stuart	EOY 2015
Goal 1, Strategy 2	Bob Hill	Dec. 2014
Goal 1, Strategy 3	Kim Jeskie	After 1-2
Goal 1, Strategy 4	Kim Jeskie	After 1-3
Goal 2, Strategy 4&18	Betty Ann Howson	March 2015
Goal 2, Strategy 9&14	David Finster step 1/Erik Talley step 2	EOY '14/ then after
Goal 2, Strategy 13	Kyle Strode (and Scott)	March 2015
Goal 2, Strategy 16	Harry Elston	EOY '14
Goal 3, Strategy 3	Erik Talley step 1	July 2015
Goal 3, Strategy 13	Scott Goode (and Harry)	March 2016

b) Results

**Goal/strategies Opportunity Mapping & discussion:** Many of the goal/strategy combinations fell in the “No Brainers” quadrant of the Opportunity Map and in the moderate resource requirement sector of the “Pursue Selectively quadrant. Interdependencies, correlative impact and considerable overlap of several strategies were noted during the discussion, resulting in collaborative champion assignments and coordination of schedules.

Opportunity Map for CCS’s Strategies:



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An outline of CCS's Strategic Plan for 2014-2015 is shown below. It is represented graphically in the Executive Summary and Appendix.

**FINAL Goal 1** (Orig# 11): Develop, populate and maintain a Lessons Learned information system that is used as a teaching tool for hazard assessment & management

**Strategy 1-1:**

Continue current development of data collection system

-Development of ontology (2015)

-Update current form (2015)

Measures: Done or not

[Impact, High. Resources, High/Medium ] **[Champion: Ralph Stuart]**

**Strategy 1-2:**

Seek support of ACS Board to support CCS as representative to address NAS "Safe Science" #7

Measure: Approval at Dec. Board meeting

[Impact, High; Resources, Medium] **[Champion: Bob Hill]**

**Strategy 1-3:**

Form working groups with potential partners (accreditation bodies & major university systems). *Note: After 1-2*

Measures: Agreements received

[Impact, High Resources, Medium] **[Champion: Kim Jeskie]**

]

**Strategy 1-4:**

Develop plan for LL collection, formatting, distribution, communication and continuity of operations/sustainability, budget/resources, and anonymity.

Measures: Plan in place & budget approved (by Board)

[Impact, High. Resources, Medium/High] **[Champion: Kim Jeskie]**

**FINAL Goal 2** (Day 1 Goal 4; orig Goal #14): Create and maintain a centralized, well-managed, current and authoritative suite of documents related to chemical safety.

**Strategy 2-1 (Orig. 2-13):**

Organize current set of documents into user applicability (i.e., primary, secondary, college/university, etc.) and content (i.e., risk/hazard assessment, best practices, emergency response). First pass by Mar. meeting 2015.

Measure: Number of documents tagged

[Impact: Medium; Resources, Low] **[Champion: Kyle Strode (Scott Goode assist)]**

**Strategy 2-2 (Orig. 2-9 & 14):**

Inventory and maintain all CCS documents (current/archived) including title, cost, revision history, availability (format/location), use rate and sales, and an archive with an editable version and all support documentation (permissions, graphics, etc.) (*Staff maintain sustainably*) 2 step: Gap assessment from current inventory – David Finster by end of 2014; Archive; locate, etc (after step 1)- Erik Talley.

Measure: Done or not.

[Impact: Medium; Resources, Low/Medium+] **[Champions: David Finster, Erik Talley]**

**Strategy 2-3 (Orig. 2-4 & 18):**

Using the CCS document inventory, review all documents bi-annually to determine what should be kept/archived. For those kept, determine what should be revised/updated. If requiring updates, determine what resources (authors, cost, timeline) are needed. (Plan in Ops Manual.) Draft by March 2015 meeting. Every fall give feedback to staff liaison, recommendations for following year on documents.

Measures: TBD

[Impact: High Resources: Medium] **[Champion: Betty Ann Howson]**

**Strategy 2-4 (Orig. 2-16):**

Develop author's guidelines for CCS-published documents. First draft by end of 2014.

Measures: Completion

Impact: Medium Resources: Low. **[Champion: Harry Elston]**

**FINAL Goal 3** (Day One goal 5, orig Goal #22): Establish a communication system that disseminates chemical safety information quickly and widely to targeted groups.

**Strategy 3-1 (Orig. 3-13):**

Define the scope, sequence of actions and targeted groups for the CCS communication system. System = people, processes and tools. (Utilize communication strategies course from LDS). Roll out by Spring meeting, 2016. Interim update by Fall 2015.

Measures: Fraction of 3 items completed.

[Impact, Medium-High; Resources, Medium] [**Champion: Scott Goode, Harry Elston (Assist)**]

**Strategy 3-2 (Orig. 3-3):**

Step 1: Finish current hazard analysis project (HARM to web tool). Step 2: Re-evaluate the rest of the CCS website to make it user-friendly and accessible (broken out by audience) using modern technologies and systems. Update the structure to mirror the CCS mission, vision and goals. Step 1: July 2015; approval Fall 2015 meeting.

Measures: TBD

[Impact, High ; Resources, Medium-High] [**Champion: Erik Talley** ]

## 7. Implementation Plan

### a) Pitfalls

Participants discussed and agreed the following are critical to CCS's successful implementation of the plan resulting from this retreat:

#### **Pitfalls [Special Attention Needed]**

- New challenges and events – de-focusing
- Time management; keep focus and priority
- Near term staff support
- Solving problems out of our control
- Chair transition
- Resources for next stages of execution
- Rest of committee buy-in and understanding



## b) Next Steps

Participants discussed key factors for successful project implementation, set a kickoff date and agreed on the following next steps:

### Next Steps for CCS

Kick-off : now



What	Who	When
Communicate with – CCS New CCS members	CCS Chair & Staff	By end of November Spring meeting
Identify Project Leads	Champions	Beginning of November
Identify project teams	Champions, Project Leads	End of November
Develop Project Plans* (Tasks, Resources, Assignments, Timelines), including resource loads and compare for all together	Project Teams	End of February in prep for Spring meeting
Set up project management/accountability system	Project Team Leads and CCS Chair	By end of November
Check Points	CCS Leadership SPR team	CCS Meetings – std. agenda item Regular Conference Calls – every 6-8 wks
Telco on subcommittee structure	SPR team – Bob&Marta	By end of Oct.
Get support from Marta's mgmt	Marta	By end of Nov.

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# APPENDIX

*(See Separate Document)*