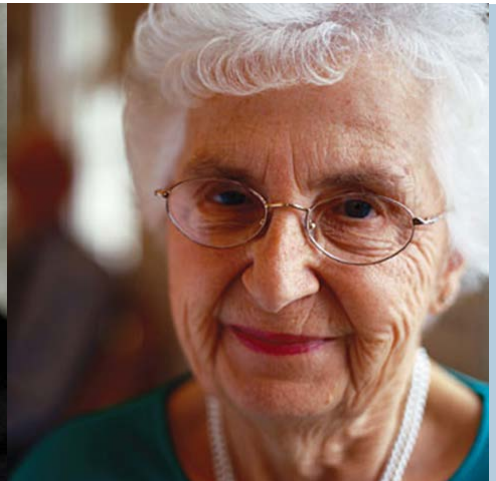
Common Electronic Submissions Gateway

Presentation to CAPRA
April 29th, 2014





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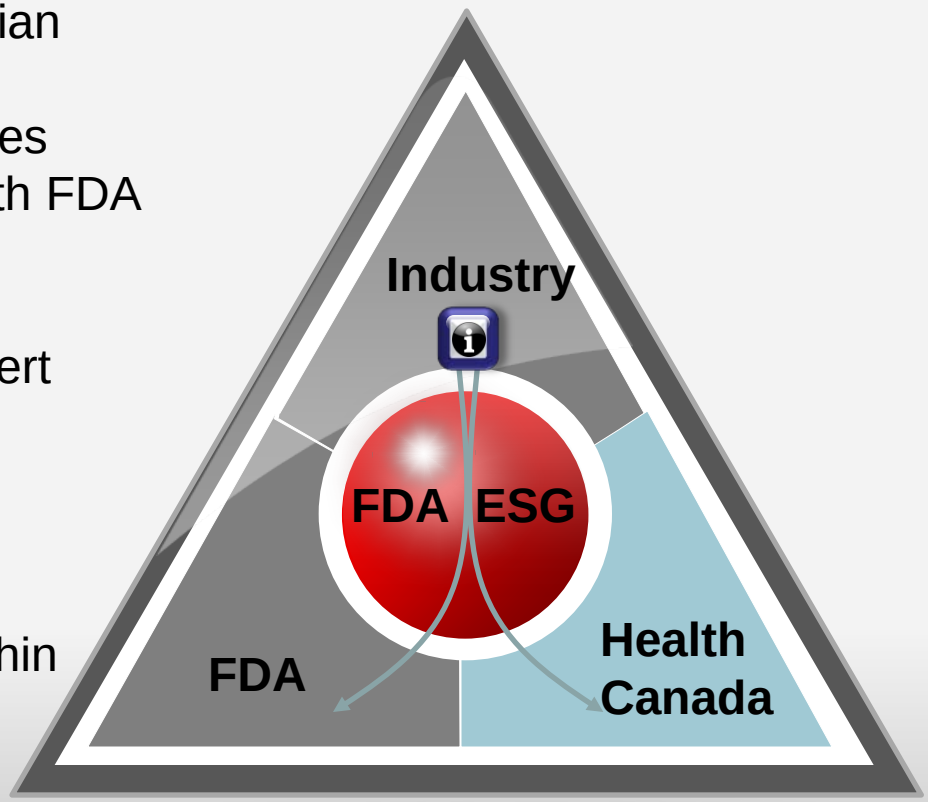
Canada

Agenda

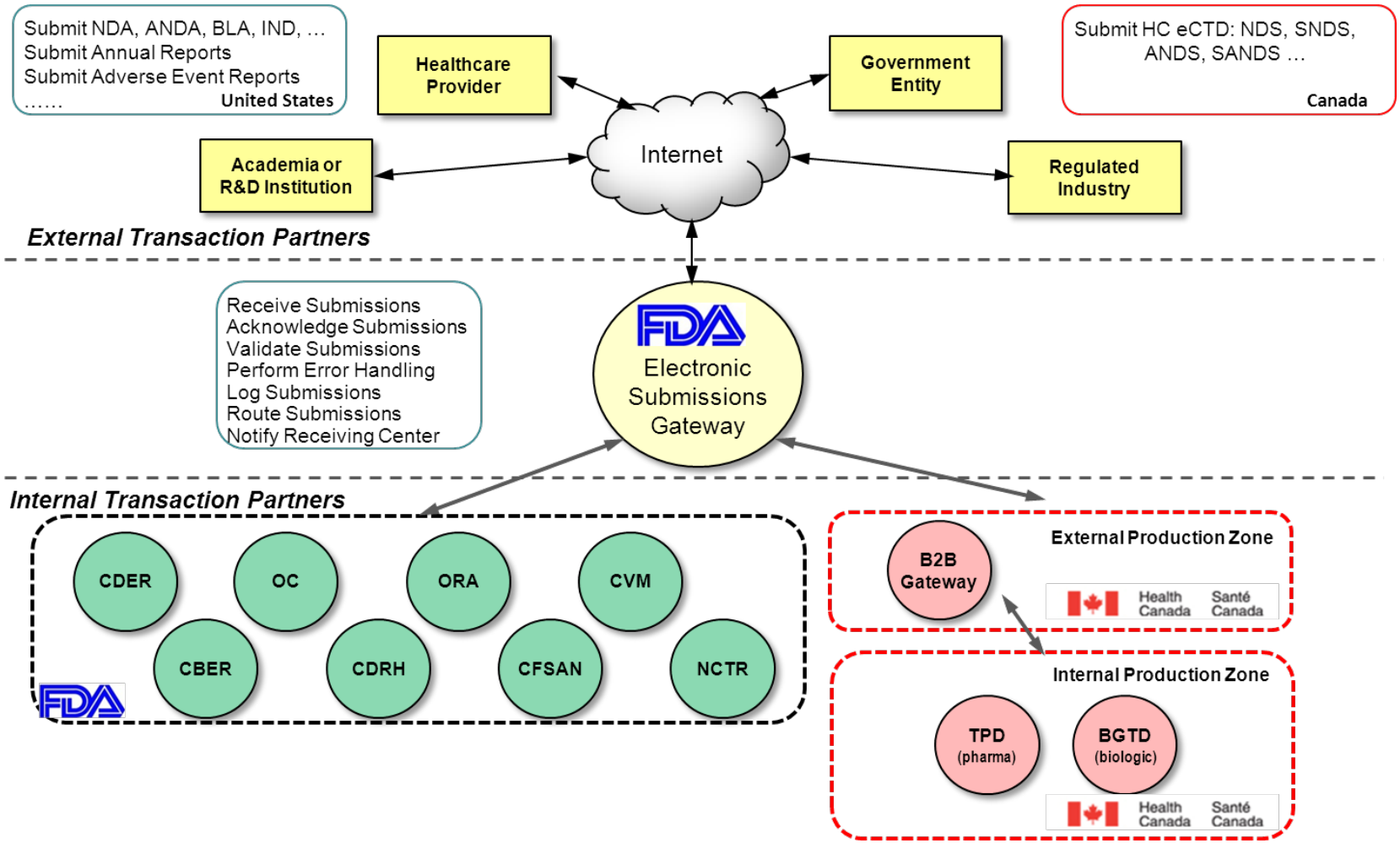
- Project Context
- The Regulatory Cooperation Council (RCC)
- The Journey
- Implementation, Security and Delivery
- Project Accomplishments
- Roadmap/Analysis

The FDA Electronic Submissions Gateway

- Service of convenience for Canadian Industry
- Common infrastructure and services
- Register as transaction partner with FDA
- Virtually no cost to Industry
  - WebTrader - Java Applet
  - X.509 version 3 Class I PKI cert
- Proven and stress tested
- WebTrader option
- Supports classic B2B Gateway Interactions
- Supports electronic signatures within submissions
- Submissions digitally signed
- Info on ESG web page http://www.fda.gov/esg



FDA/HC CESG Project Context



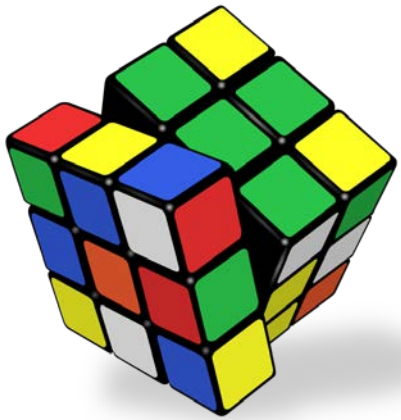
Regulatory Cooperation Council (RCC)

Regulatory Cooperation Council (RCC) - A New Era in U.S.-Canada Regulatory Partnership
December 7, 2011

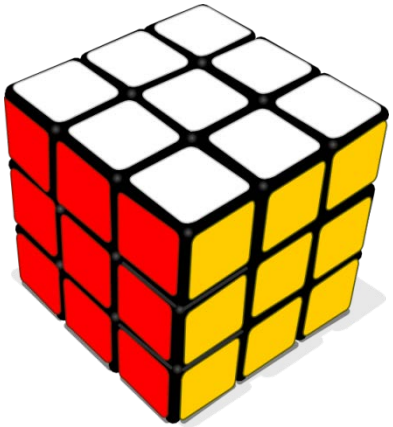
The President and the Prime Minister announce RCC Joint Action Plan

29 specific initiatives for greater regulatory alignment in four key sectors including **food**, **health & consumer products**

Each initiative is an opportunity to resolve existing issues while laying a foundation for lasting regulatory cooperation mechanisms to ensure ongoing alignment



Make it easier for American and Canadian firms to do business on both sides of the border through greater regulatory alignment



Regulatory Cooperation Council (RCC)

- The A4 initiative, the Common Electronic Submissions Gateway (CESG), was one of four initiatives sanctioned by the Food and Drug Administration (FDA) under the RCC umbrella
- Structured Quarterly Reports
- Office of Management and Budget (OMB) monitored
- Political Imperative
  - Provided motivation
    - OMB
    - Presidential endorsement
  - The Carrot or the Stick

The Journey

- The Beginning
  - June 17, 2011, email query from Craig Anderson
  - June 21, 2011, DIA Annual; Chicago
    - Bob Yetter (FDA) and Mike Ward (HC)
    - Meet with Mike Ward and discussed building a Gateway for Health Canada
    - Mike Ward put me in contact with Vikesh Srivastava
  - First conversation with Vikesh Srivastava – June 28, 2011
  - Called colleagues at the PhRMA ERS WG and asked what this build would mean to regulated Industry – June 28, 2011
  - July 6, 2013, first CBER high level internal meeting to discuss necessary items/hurdles to make this initiative a success.
  - August 10, 2011, Agency discussion and presentation (Mac Lumpkin)

The Journey

- August 10, 2011, Proposed Gateway Submission Process
- August 17, 2011, version 1.0 of proposed Concepts of Operations (CONOPS) Document
- September 21, 2011, Finalized Concept of Operations
- September 28, 2011, Started Discussions of Technical Proof of Concept for Health Canada implementation
- October 5, 2011, Final CONOPS Document.
- November 16, 2011, Discussion regarding Regulatory Cooperation Council (RCC)
- December 7, 2011, Officially adopted as the A4 initiative of the RCC
- December 12, 2011, Starting funding mechanism discussions
- January 31, 2012, RCC Stakeholder Presentation – Presented Indicative Work Plan A4 initiative to Public Stakeholders

The Journey

- February 1, 2012, Settled on the Cooperation Research and Development Agreement (CRADA) as funding mechanism
- February 1, 2012, Dano Murphy and Charles Kemp agree to shepherd the CRADA process
- February 6, 2012, Started ESG Contract Modification process for Health Canada implementation.
- September 28, 2012, Signed new FDA ESG support contract
- December 8, 2012, ESG Axway software upgrade to 5.9.6
- December 12, 2012, ESG Contract Modification signed
- January 2, 2013, Commissioner approves CRADA
- January 4, 2013, Center Director of Center for Biologics Evaluation and Research signs the CRADA

The Journey

- January 10, 2013, Director General for Resource Management and Operations Directorate and Therapeutic Product Directorate sigh the CRADA
- February 22, 2013, Funds are obligated and the Implementation Whole-heartedly commences
- August 3, 2013, Axway software upgrade version 5.10.1
- September 27, 2013 FDA ESG new infrastructure delivered
- October 21, 2013, H.C. crossed the finish line to their new beginnings
- November 6, 2013, Health Canada begins on-boarding industry trading partners
- January 31, 2014, CESG is publically available

Concept of Operations (ConOps)

- August 17, 2011 – October 5, 2011
- Twelve versions of the document
- Full scope of the development effort detailed
- Rules of Engagement
  - Operational Constraints
  - Security Considerations
  - Proposed System Description (High Level)
  - Organizational Impacts
  - Use Cases
  - Performance Characteristic (30 gigabyte limit)
- Electronic Signature Policy
- September 21, 2011 started Technical Proof of Concept Tests
- Changed the FDA system design as a result of some of the issues encountered during the Proof of Concept testing

Our biggest challenge

- What type of agreement would provide:
  - Health Canada access to FDA ESG services;
  - Allow Health Canda to transfer **funds** to the FDA;
  - Allow the FDA to accept the funds and expand their ESG program to support Health Canada and Canadian industry;
  - Respect the legal framework of both parties;
  - Enable joint development and customization;
  - Support creation of permanent mechanisms to foster greater regulatory cooperation and further alignment

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Funding

- Finding a suitable vehicle that would allow for the transfer of funds to support the CESG build was unusually difficult.
- Discussions focused on the vehicle for funding for two months. Frustrations were exceedingly high as there were no good vehicles to accomplish this task - that is if you were not connected to DOD and the Canadian military.
- With no good options in sight and a desperate need to be able to transfer funds across the US border into the US Government the discussion focused on the Cooperative Research and Develop Agreement (CRADA) vehicle and we decided to utilize it.
- Beginning of the process to the final signed CRADA document – February 1, 2012 to January 10, 2013
- Dano Murphy - CBER's expert in this area. Dano functioned as CBER's lead and worked with Health Canada's Legal representatives on developing the CRADA and shepherding it through the maze of legal processes. Dano and Charles Kemp are the unspoken hero's of this initiative.

CRADA - Preferred Approach

- Cooperative Research and Development Agreement (CRADA)
  - Allows FDA to conduct activities consistent with their mission;
  - Supports exchange of Intellectual Property, expertise and information;
  - Allows FDA to provide personnel, facilities, equipment and other resources;
  - Allows FDA to accept funding to perform development to both parties benefit;
  - Establish CRADA process provides high-level of scrutiny with U.S. FDA & parent department of Human Health Services
  - This agreement addresses our original challenges by
    - Providing access to ESG and associated support services;
    - Enabling joint development and customization of ESG;
    - Facilitating further regulatory cooperation.

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Implementation

- Began in earnest on February 22, 2013
- Leveraged the ConOps that the results from the Technical Proof of Concept to bring the system enhancement forward.
- Added infrastructure to the FDA ESG across the Production and Pre-Production Environments.
  - Two Application servers
    - One Production
    - One Pre-Production
  - Two Database servers
    - One Production
    - One Pre-Production
  - Additional Networks accounts and permissions
  - Added Health Canada in our paradigm as if it were a Center at the FDA.
- Enables regulated Industry to utilize one x.509 version 3 class 1 certificate for regulatory submissions to two distinct Regulatory Authorities.

Security

Security

- Mission Critical System
- Federal Information Security Management Act (FISMA) Moderate rating.
- Re-Evaluating the System Security Posture
- Authority to Operate (ATO) in place
- Signed Interim Security Agreement (ISA) between Health Canada and the Food and Drug Administration (FDA)
- We have addressed our POA&M items (Plan of Action and Milestones)
- The FDA Electronic Submissions Gateway (ESG) receives guidance compliant submissions from our regulated Industry that are certified to be virus free. To date we have not been unavailable due to a virus attack.
- FDA CBER electronic submissions infrastructure has never been unavailable due to a virus attack.

Security

- The FDA ESG, also known as the Common Electronic Submissions Gateway (CESG), does not keep copies of submissions targeted for receipt by Health Canada for any duration of time.

- The FDA ESG does keep copies of the submissions targeted for the FDA in our Storage Area Network for 10 working days before they are deleted.

Delivery

- FDA infrastructure delivered and fully configured – September 14, 2013.
- HC infrastructure delivered and configured – September 24, 2013
- Health Canada has limited on boarding after the September 27, 2013, Production delivery.
- After January 31, 2014, full and open Production System enrollment for Health Canada
- Twenty-six months from Concept to Delivery

ESG Future Plans - October 28, 2013

- New Submission Types – Health Canada
- Web Trader Login Capacity testing – accomplished for version 5.10.1,
  - 250 concurrent users
- Standing the Web Trader Hosted Facility/Solution
  - Finished Security Assessment
  - Starting Industry Testing
  - Production in May or June 2014
  - Demo?
- Starting Interactions with Veterans Administrations
  - Delayed

ESG Future Plans - October 28, 2013

- Increase Software Support model
  - From Standard Support model
  - To Mission Critical Support
- Technical Refresh Plan
  - New Test Environment with Internet Connectivity
  - Second Cluster for Pre-Production Environment
  - Second Cluster Production Environment
  - Goal is to make the ESG/CESG a high availability system with 99.9% up time.
- New Governance
- Software?

ESG Future Plans - October 28, 2013

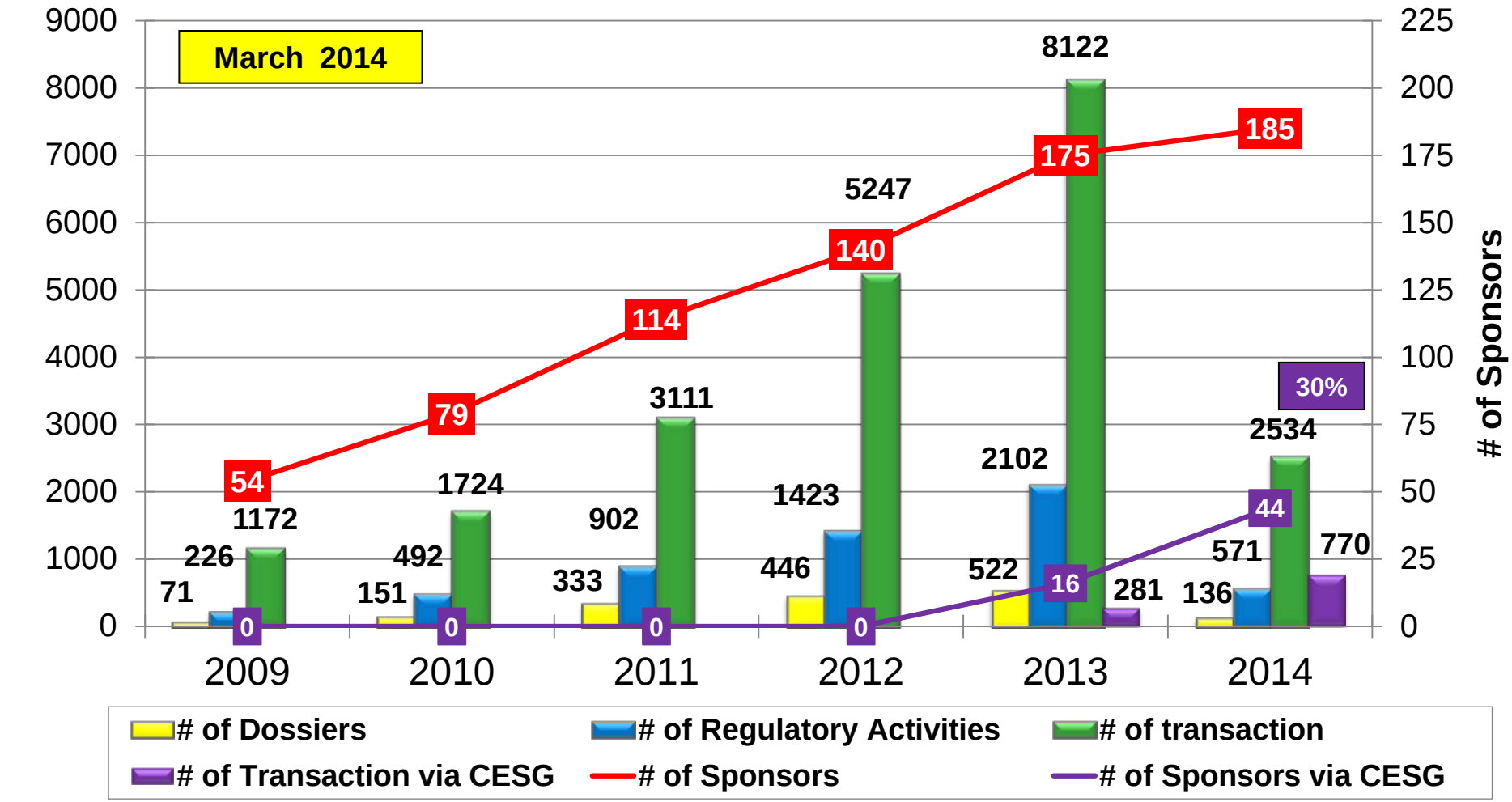
- New Software Purchase
  - Two-way communications
  - Tetra-byte submission transport
  - API's
  - Improved Submission Processing
    - CFT
  - New Submission Tools
    - Sentinel
    - Secure Transport
- Stabilize and prepare for the new Regulatory Mandates
- Disaster Recovery Site for the Agency is currently being studied

Scope CESG: eCTD Regulatory Transactions

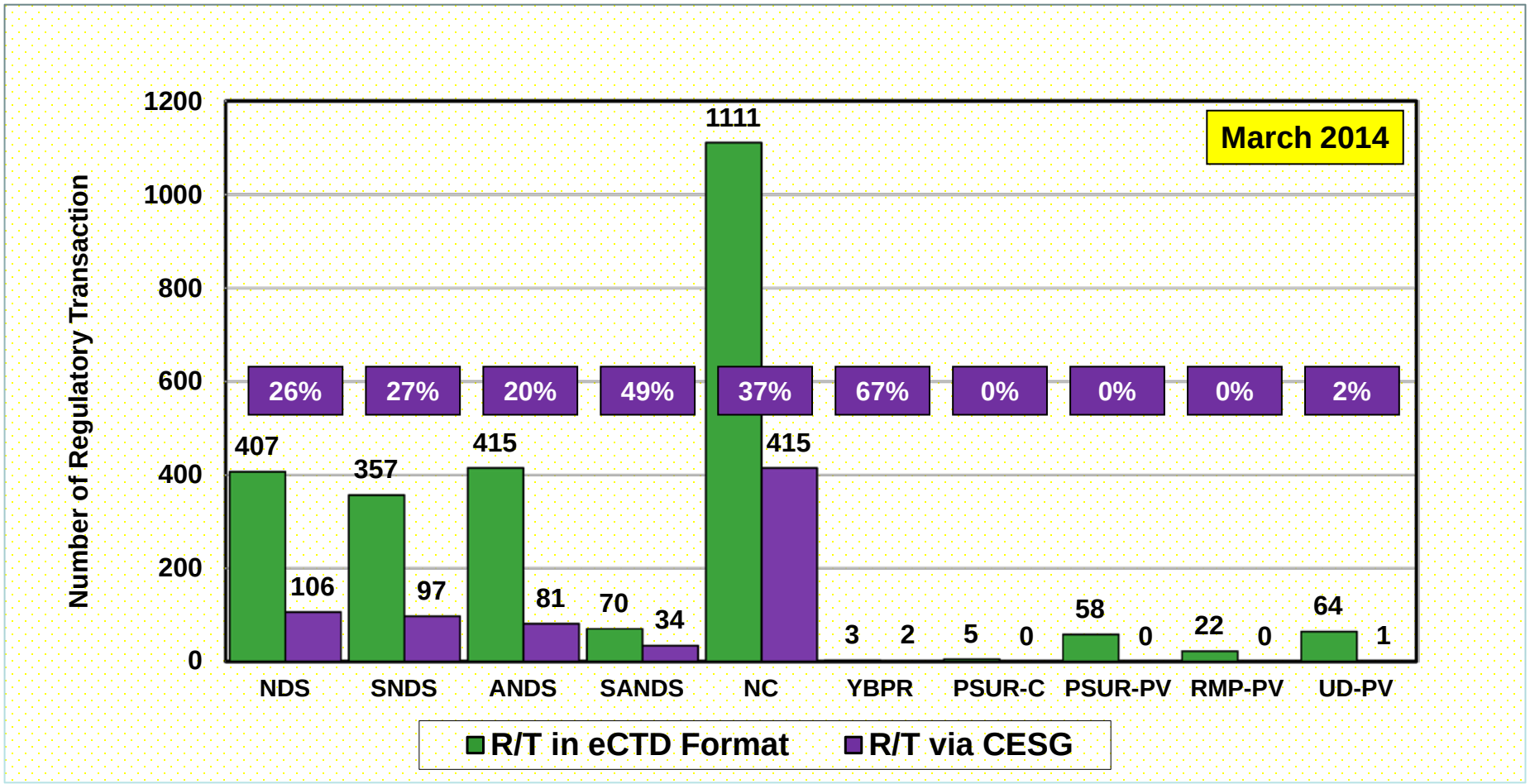
- Only certain eCTD-formatted regulatory transactions are currently accepted while Health Canada completes the necessary business transformations
- Full list of Regulatory Transactions types currently acceptable found in Frequently Asked Questions section of CESG page
  - FAQs 8 and 9
  - http://www.hc-sc.gc.ca/dhp-mps/prodpharma/applic-demande/guide-ld/cesg-pcde/faq-eng.php

Regulatory Activities in eCTD format

(NDS, SNDS, ANDS, SANDS, NC, DINA, YBPR, Pharmacovigilance Data)



Regulatory Transaction in eCTD format vs. Regulatory Transactions received via CESG in 2014



Goals

- Maximize the overall value, to Industry and Health Canada, in any decisions to expand the scope of CESG usage for electronic regulatory activities and transactions.

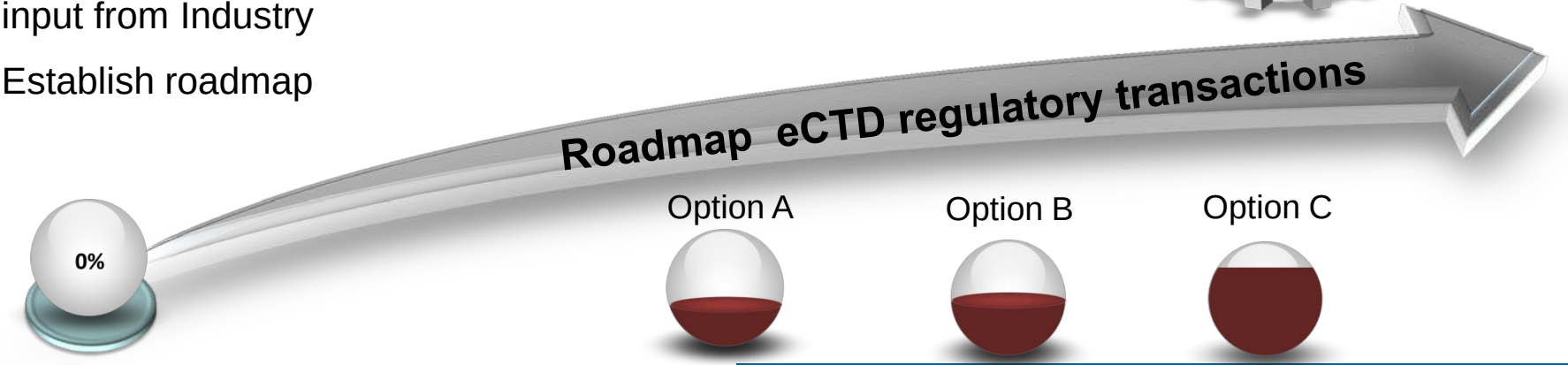
- Establish cost drivers and timeframe for business/IT investments

- Develop a roadmap for any expansion to the scope of CESG submissions in eCTD format

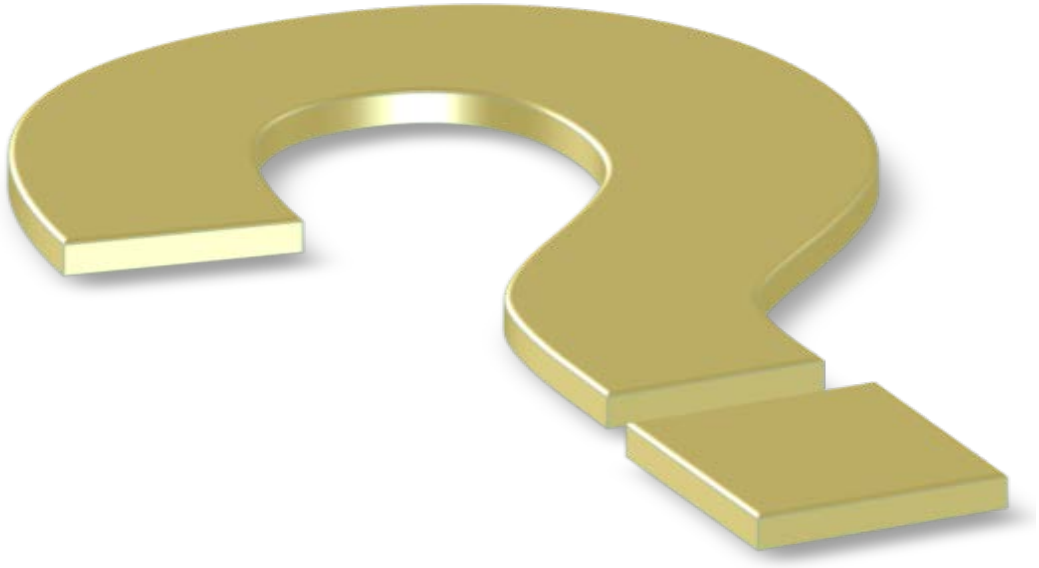
Going Forward: CESG Roadmap Cost Benefit

- Identify Scope options
- Capture options, costs and benefits,
- Perform option analysis
  - Current scope eCTD Transactions
  - Current scope non e-CTD Transactions
  - Expand scope to include receipt of initial sequences in eCTD format
- Determine next steps with input from Industry
- Establish roadmap

Item	Option A	Option B	Option C
Savings	x	x	x
Costs	$	$	$
ROI	$	$	$
Timeline	x	x	x



Questions?



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