University of Maryland

Project Management Symposium

NEXT SESSION

Managing Change in BioPharma - A Tough Pill to Swallow

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This session will be recorded.

Project Management Symposium

Managing Change in BioPharma – A Tough Pill to Swallow

AstraZeneca Team

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Abstract

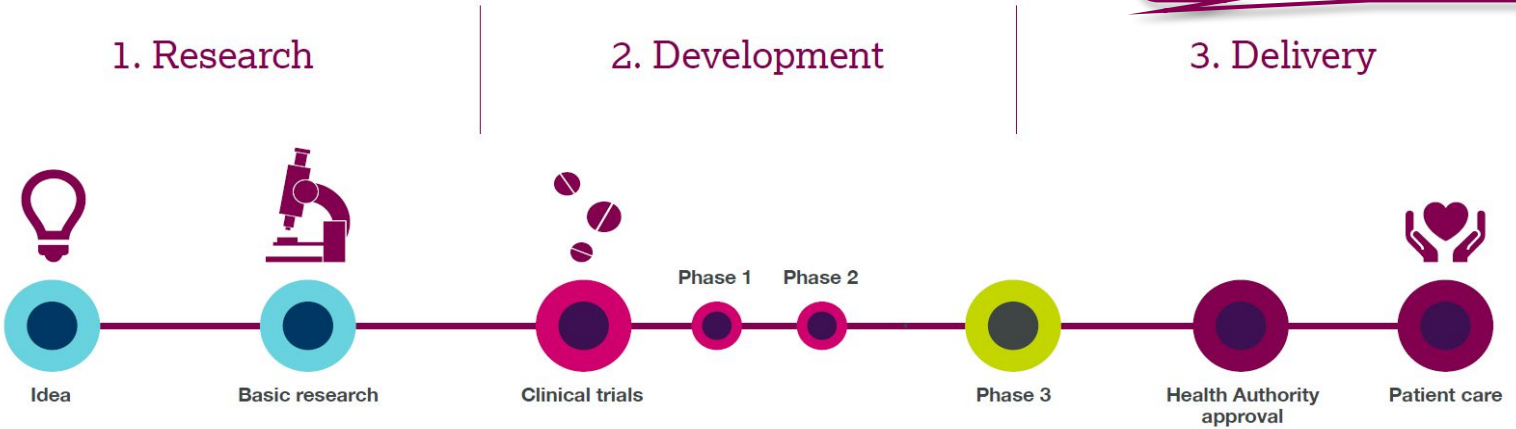
Managing the development of a drug molecule from research through commercialization is a long and arduous journey. Along that journey are many speed bumps and triumphs, process optimization, clinical trials, and manufacturing validations. Through each phase of development, toxicology, and clinical trials, lies a variety of key inputs and decisions which generate any number of required changes and risks. The approach a project team takes to change management can impact timelines, budgets, and resources and ultimately define the success of the program and take the team to the next level. Understanding why the change is being made, who are the stakeholders involved, what the key objectives are, and how the change will be managed are all vital on the road to meeting goals and delivering medicines to patients.

Outline

1. Pipeline / Change Framework
2. Chemistry Manufacturing & Controls (CMC)
3. Clinical Pharmacology & Quantitative Pharmacology (CPSS/CPQP)
4. Q & A

The Pathway of Drug Development

At each stage of development, new functional and global product teams form, managed by a community of **> 500 project managers**



The average time of drug development is approx. **10 years!**

The Internal and External Environment Influences Drug Development

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Internal Drivers of Change

- Strategic priorities
- Trial design and delivery
- Advancements in development and manufacturing
- Advancements in drug delivery and patient access
- Business process and operating models

External Drivers of Change

- Clinical practice guidelines
- Health authority and government regulations
- Market landscape
- Geopolitical changes
- Global trends & events

Global Product Team Change Framework

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Project team endorsement

Project team decision

Inform	Impact Assessment	Readiness Assessment	Implementation
Who? Change Owner	**Who?** Global Product Team	**Who?** Global Product Team & key stakeholders	**Who?** Global Product Team & key stakeholders
❑ Clearly describes the change & rationale ❑ Describes desired outcome ❑ Provides early evaluation of impact	❑ Evaluates cross functional impact and assesses risk ❑ Evaluates impact to time/cost/resources ❑ Evaluates impact against governance approved plans	❑ Develop implementation plans ❑ Identify and secure additional resources needed ❑ Determine governance approvals required	❑ Document project team decision ❑ Seek governance approvals ❑ Implement against approved plans ❑ Monitor progress, impact and risk

Global Product Teams Drive Development from Idea to Launch

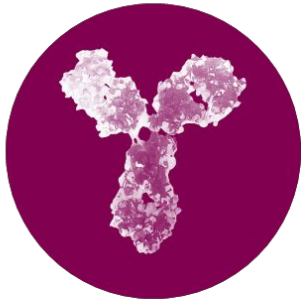
Core GPT membership is illustrative and changes during the lifetime of development

Global Product Team members represent entire teams of subject matter experts and are accountable for the quality and robustness of their functional contributions to the development plans.

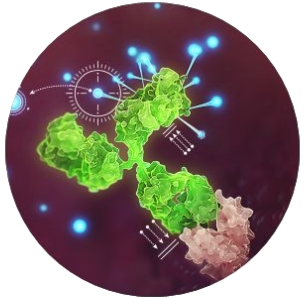
The GPT members are constantly managing change as the world changes around us and functions innovate and improve our ways of working to deliver medicines to patients faster.

What is Biopharmaceutical Chemistry, Manufacturing and Controls (CMC)?

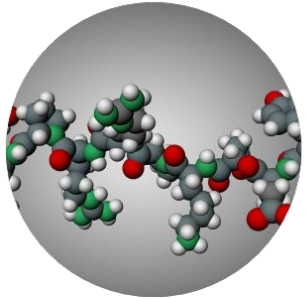
Biopharmaceutical ("biologic") = an active substance derived from or extracted from a biological system (living organism). They are often administered as an injection or infusion.



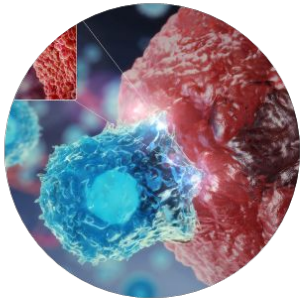
Antibodies



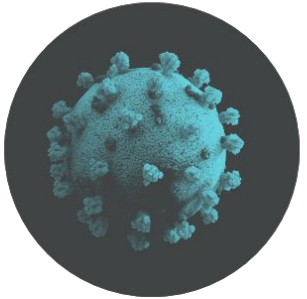
Antibody-Drug Conjugates (ADC)



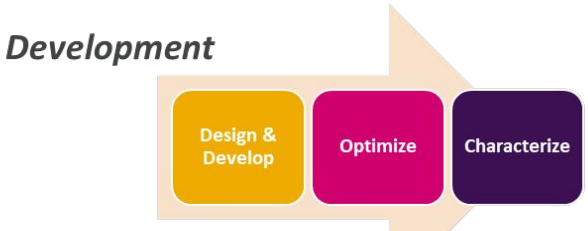
Peptides



Cell Therapy



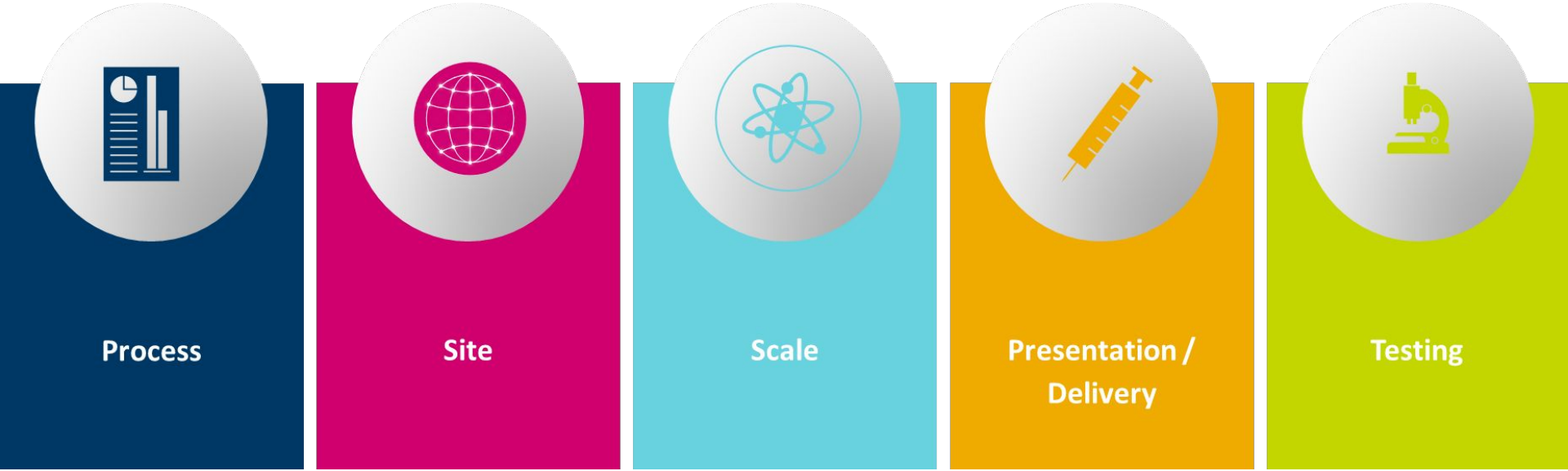
Virus / Nucleic Acid



Why is Change Control Needed in CM

- Prevention
- Mitigation
- Quality
- Verification & Validation
- Analysis & Documentation

Scope of Changes



Case Study – The Need for Change Management in CMC is Driven by Progression of Development through the Drug Life Cycle

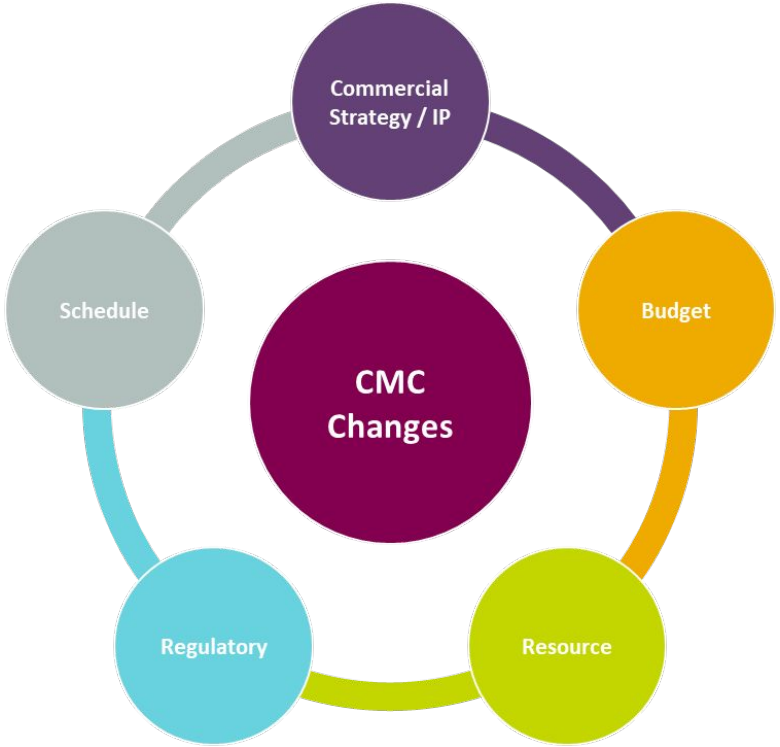
Phase 1

Drug Substance	State of Matter of Drug	Final Container	Supply Chain Packaging and Labelling
			
500L (Process 1)	Powder (Lyophilized) Small volume	Vial AZ Internal Fill site	Clinical Supply

Phase 3 / Commercial

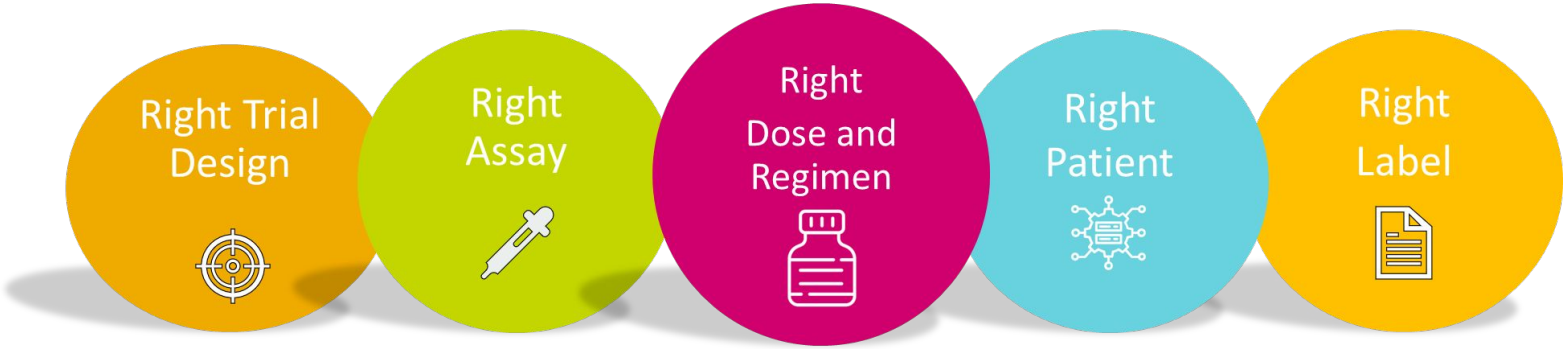
Drug Substance	State of Matter of Drug	Final Container	Supply Chain Packaging and Labelling
			
2,000L (Process 2)	Liquid Large volume	Pre-filled Syringe External Fill Site	Commercial Supply Health Provider / Patient Centric

CMC Change Management Impacts Many Areas of the Business



What is Clinical Pharmacology and Quantitative Pharmacology ?

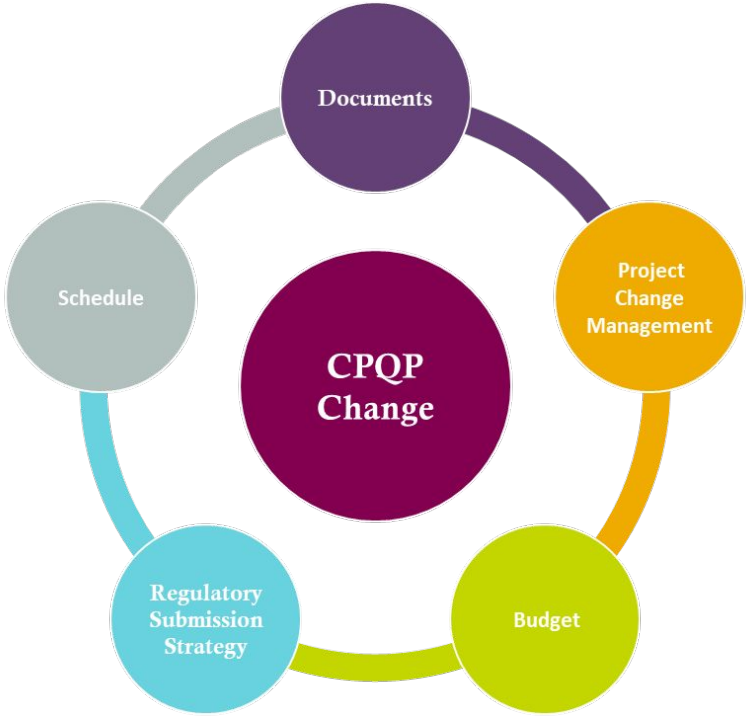
Mission: We define the therapeutic window ensuring the *optimal dose for all patients*



Vision: Smart and decisive medicines development, informed by modeling, driven by clinical pharmacology

Our concentration drives response

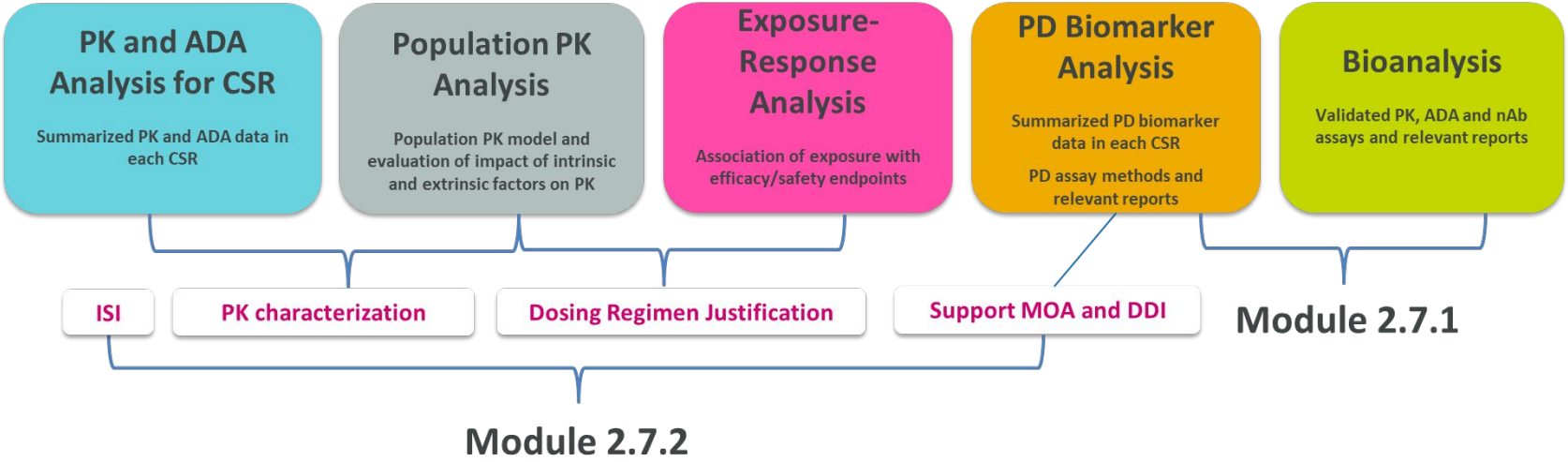
Impacts of Clinical Pharmacology and Quantitative Pharmacology (CPQP) Change Management



Submissions Documents From Clinical Pharmacology

Submissions Project Management Office (SPMO) supports regulatory submission projects in terms of preparation of Modules 2.7.1 and 2.7.2 as well as associated Module 5 documents.

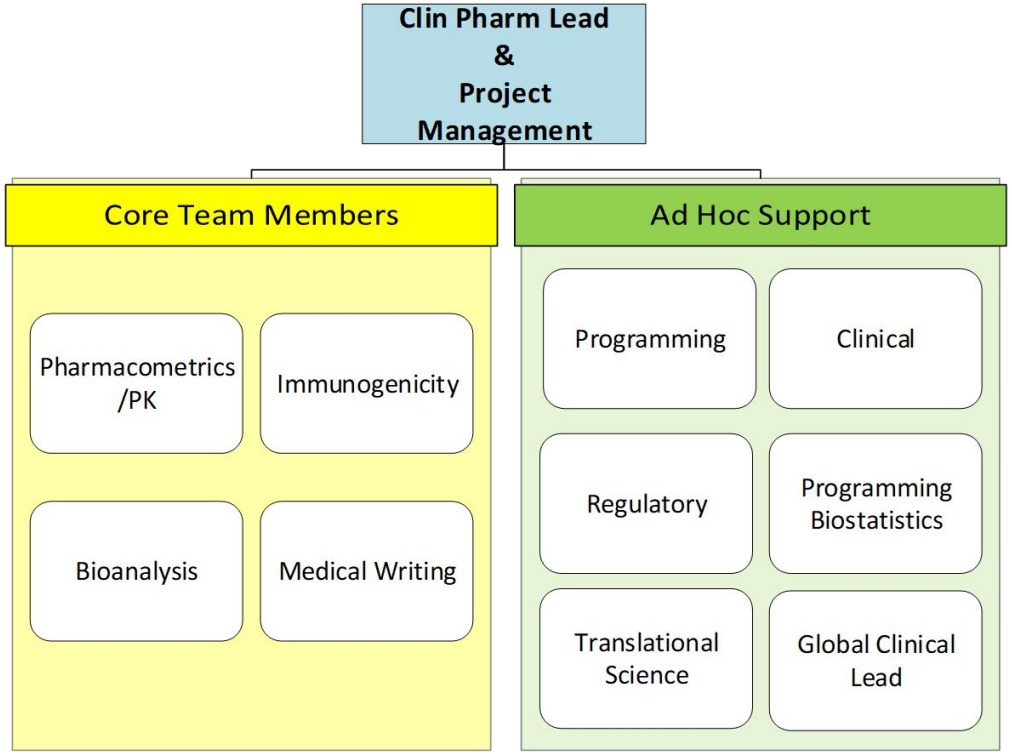
This includes summaries of: Clinical Pharmacology, Biopharmaceutics, Bioanalytical, Population pharmacokinetics (PopPK), Exposure-Response of Efficacy and Safety and Integrated Summary of Immunogenicity (ISI).



Supported Module 5 documents include the Population PK Report and the Integrated Summary of Immunogenicity.

Other project support may include developing a Communication Strategy and Plan, coordinating responses to Health Authority Questions, and Advisory Board coordination.

Clin Pharm Submission-Team Structure



- Additional members might be invited based on the agenda items
- Additional PK Scientist(s) to be added as needed

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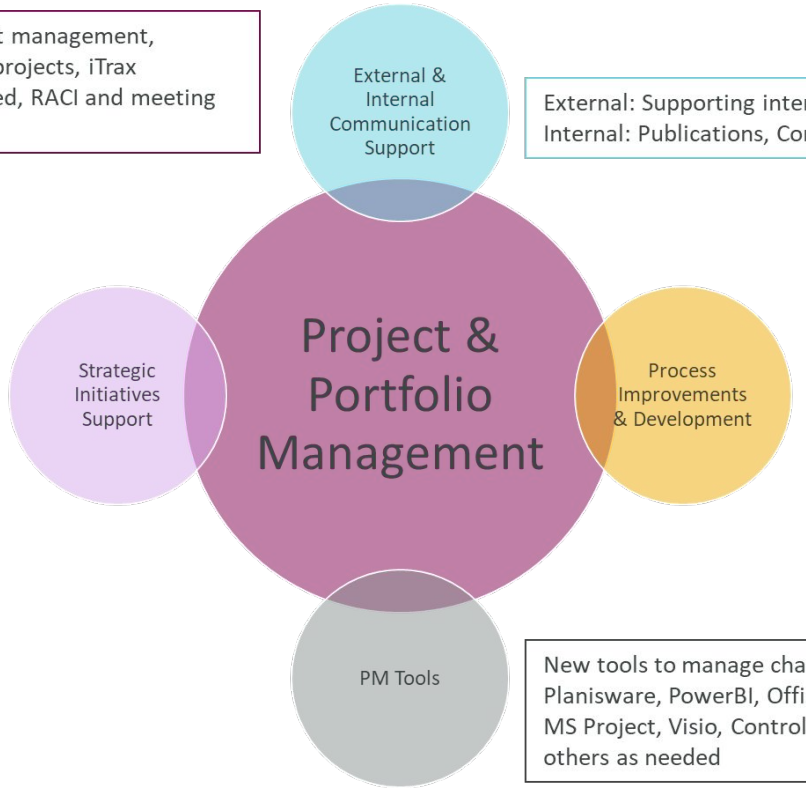
Project Management Changes in Clinical Pharmacology

PM core responsibility: active project management, oversight, tracking and reporting of projects, iTrax implementation, risks, lessons learned, RACI and meeting management.



External: Supporting interactions with Health Authorities
Internal: Publications, Conferences, and Regulatory Submission

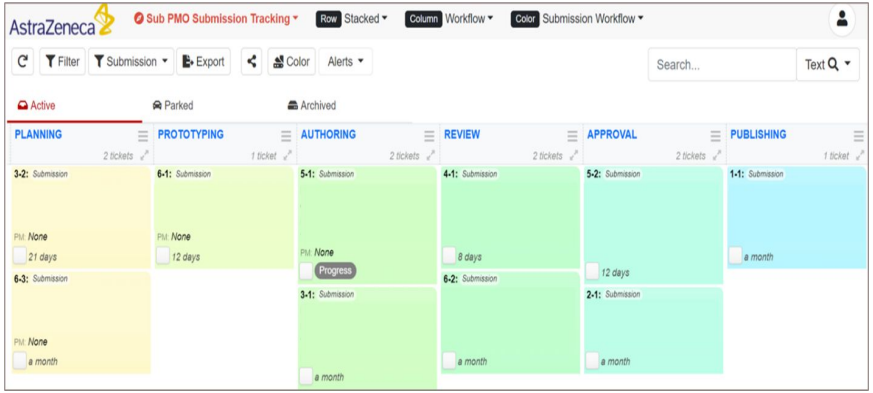
Strategic Initiatives include; accelerated submission activities, and great place to work initiatives

Process Improvements include; Process mapping, changes to existing processes and tracking of KPIs

New tools to manage changes: iTraX, Planisware, PowerBI, Office Timeline Pro+, MS Project, Visio, Control Tower, AHAA tool, others as needed

Project Reporting changes (Tools)

iTRAX system



Data Gathering/compiling in iTRAX system:

- ✔ project updates on regulatory submissions,
- ✔ validation of data
- ✔ review by PM

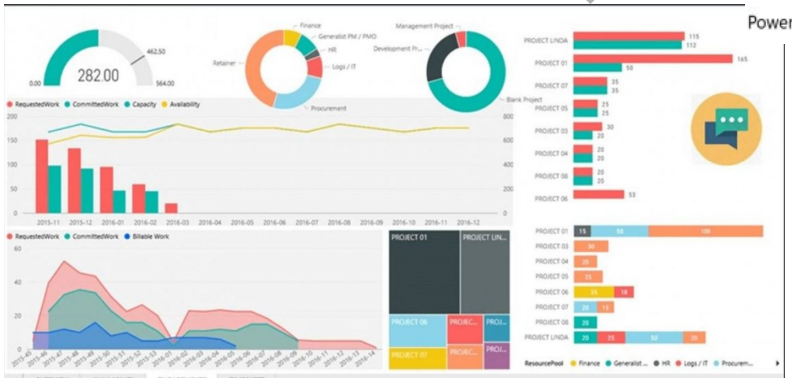
CPQP reports are centralized and automatically generated from iTRAX system to Power BI.

iTrax data is automatically exported to an excel file that is saved to SharePoint.

This excel is linked to Power BI dashboards and automatically refreshed every day.

Power BI dashboards

Power BI Desktop



Benefits:

minimizing inadvertent human errors, building value long-term relationship with team members, monitoring regulatory deliverables timelines, identifying projects at risk early on, combining data from various sources, reliable and consistent data, providing high quality regulatory submissions reports, accelerated timelines and more effective ways of working.

Analytics of Health Authority Answers (AHAA) Tool

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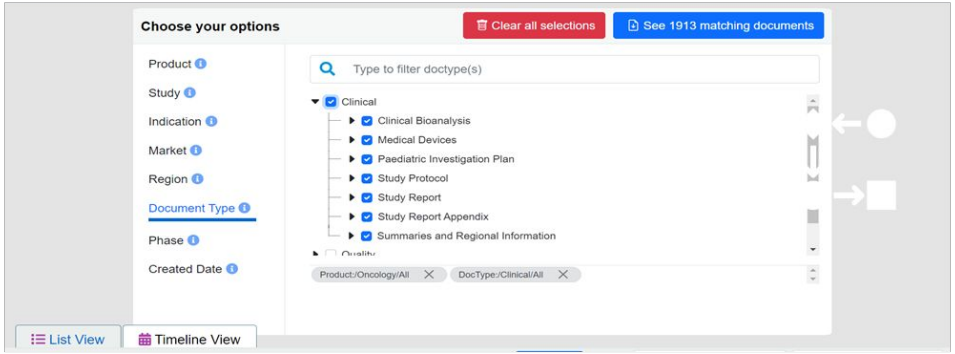
Vision

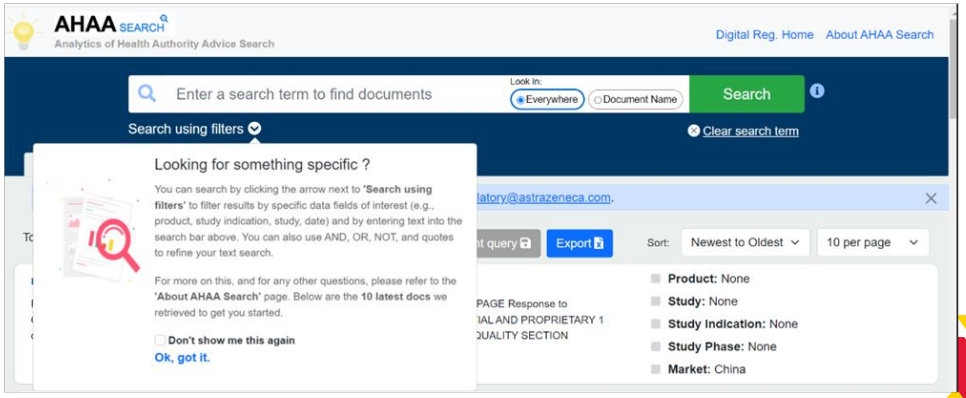
- **Providing rapid insights** to AZ Regulatory Scientists for authoring of responses to Health Authority Questions, scientific meetings, and more
- **Effortless exploration** of the health authority advice AZ has received

Benefits

- **Faster and data-driven** preparation for HA interactions
- **Increased probability of regulatory success** through increased incorporation of feedback received
- **Drive insights and identify the success factors** that contribute to product approvals

18 types of documents have been selected by CPQP and iBA





Lessons Learned on Submissions and Health Authority Questions Analysis and Implement Changes

- ✓Lessons Learned sessions are conducted after first regulatory submissions and receipt of Health Authority questions.
- ✓Results and recommendations are reviewed, discussed and approved during group workshops.
- ✓The Lessons Learned Repositories established, so the knowledge can be shared for future projects.
- ✓Project Manager tracks implementation and changes of suggested improvements.

Conclusion: Managing Change in Drug Development is Complicated but Unavoidable

Project Managers play a crucial role in ensuring that:

- Change management is initiated at the right time in response to internal and external drivers of change
- Change is carefully managed within the triple constraints and incorporated in to planning, executing and monitoring of drug development
- There is good communication between global and functional teams for seamless implementation of changes

Q & A

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AstraZeneca has a

Large Life Sciences Project Management Workforce in The National Capitol Region

Evaluate Session