PREPARING FOR YOUR REGULATORY SUBMISSION - TIPS FOR EFFECTIVE REGULATORY STRATEGY

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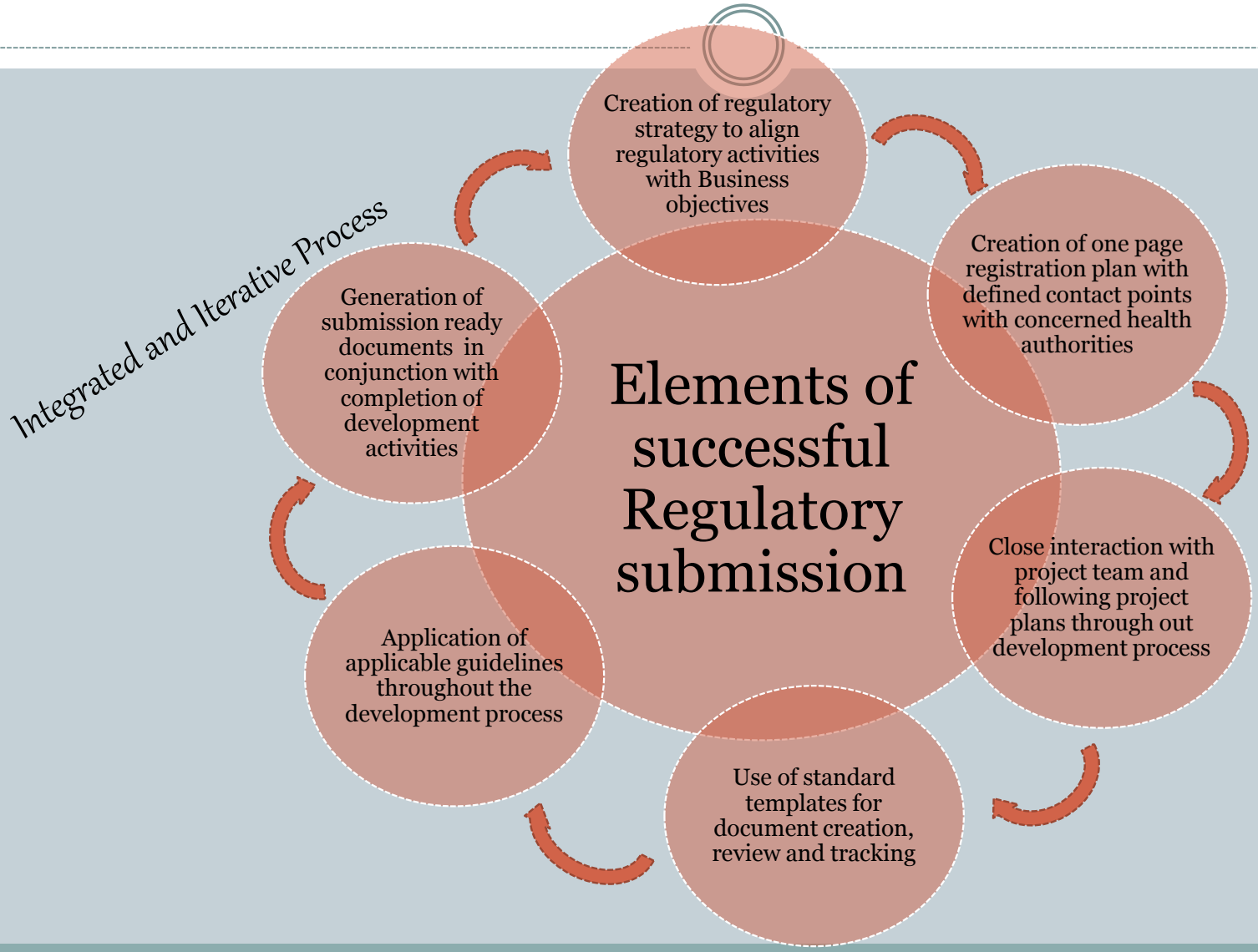
Elements of Successful Regulatory Submission



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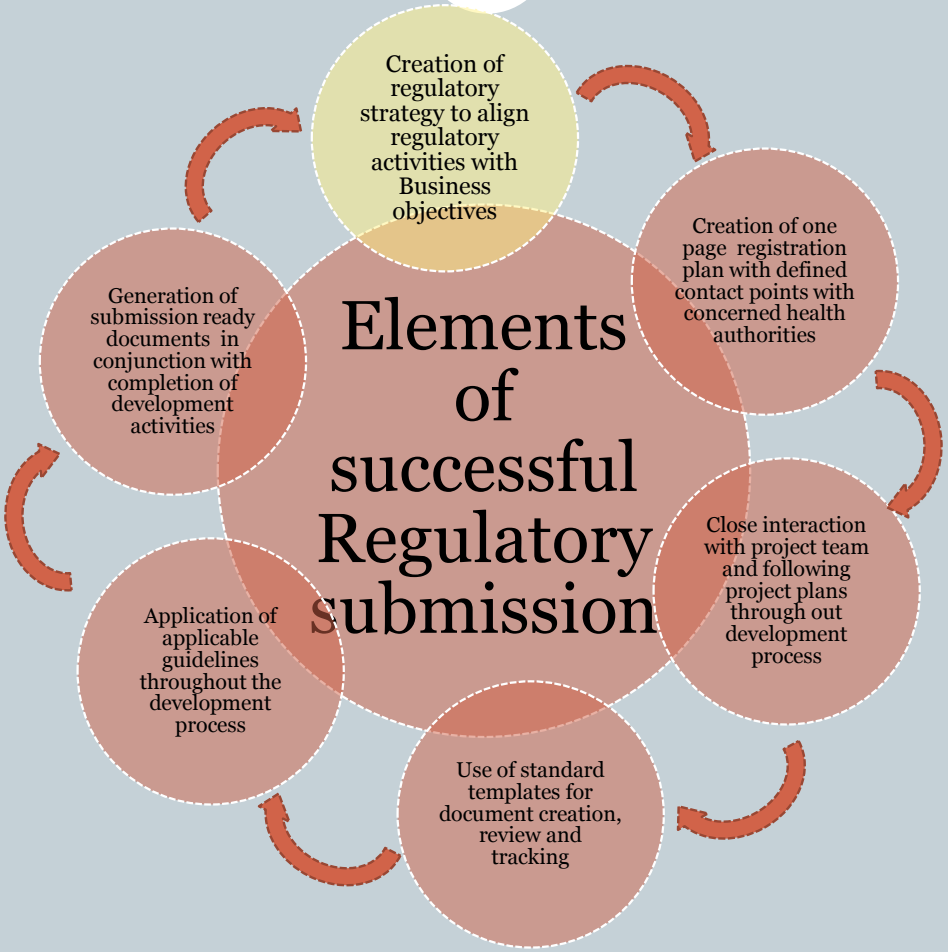


Creation of Regulatory Strategy

Creation of regulatory strategy to align regulatory activities with Business objectives

- Goal
  - **A well- developed and thought out plan that is balanced, realistic and achievable to support the organization's mission and vision.**
- Purpose
  - To define the plan for developing the product with the goal of obtaining regulatory approval in desired markets and lifecycle management/maintenance post approval
  - To establish GO/NO GO decision points
  - To outline which path to take, with the background and the rationale of why a specific path is selected or recommended

Elements of Regulatory Strategy - 1/3

Creation of regulatory strategy to align regulatory activities with Business objectives

- Target Product Profile
  - Targeted market(s)
  - Targeted indication(s)
  - Targeted Product composition, strengths, presentation
  - Targeted shelf life and storage conditions
- Development program and Overall project timelines
  - Regional vs. global development
  - Regulatory requirements in the jurisdictions of interest
  - Understanding of constraints, if any, to market the product in country(ies) of interest

Elements of Regulatory Strategy - 2/3

Creation of regulatory strategy to align regulatory activities with Business objectives

- Quality Aspects of development program
  - Manufacturer – Who, where?
  - Manufacturing Capabilities – small scale, commercial scale
    - Timing of scale-up , if any
  - Analytics – Applicable monographs (USP/Ph.Eur.); Compendial methods; Who, where?
- Non-Clinical Program
  - Regional vs. global development
  - Regulatory requirements in the jurisdictions of interest
  - Understanding of constraints, if any, to market the product in country(ies) of interest

Elements of Regulatory Strategy - 3/3

Creation of regulatory strategy to align regulatory activities with Business objectives

- Clinical program
  - Regional vs. global development
  - Phase(s) and # of clinical trials
  - Single vs. multi-country / Single vs. multicenter study(ies)
    - Country(ies) where the study(ies) will be conducted
  - Type of clinical trial application - CTA/IND/IMPD
  - High level study design and sample size
  - Comparative vs. non-comparative
    - Comparator – placebo/standard of care/reference product

Influences on Regulatory Strategy

Creation of regulatory strategy to align regulatory activities with Business objectives

External Influences

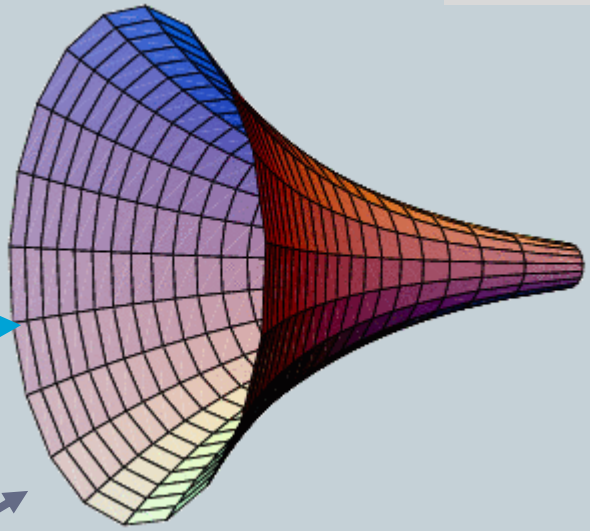
Competitive Products
Technology
Patients
Patient Advocacy Groups
Etc.

Regulatory Influences

Regulatory Authorities
Guidelines
Standards Organizations
Etc.

Internal Influences

Regulatory Affairs
Product Development
Manufacturing
Etc.



Regulatory Strategy

Regulatory Strategy – Internal Factors

Creation of regulatory strategy to align regulatory activities with Business objectives

- Market objectives (e.g., desired claims and markets)
- Where is the company positioned in the space – leader, fast follower, me-too?
- The definition of success
- Business drivers
- Degree of development work already completed
- Previous experiences with similar products
- Depth of understanding of technology and mechanisms of action
- Availability of resources (time, staff, expertise, and money)
- Interactions with other business/development projects
- Organization of the business (e.g., in-house vs. outsourced development capability)
- Previous interactions with regulatory authorities
- Interaction with reimbursement strategy
- Planning evidence development

Regulatory Strategy – External Factors

Creation of regulatory strategy to align regulatory activities with Business objectives

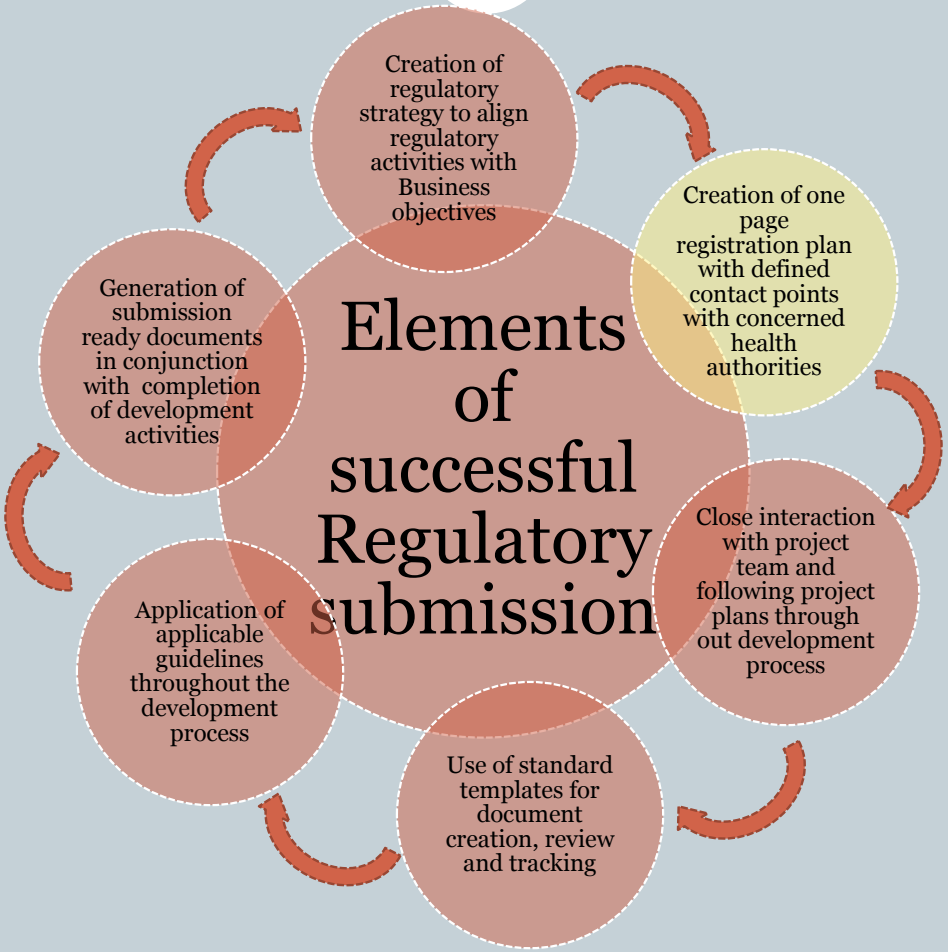
- The competitive landscape
- Trends in the domestic and global practice of medicine and standard of care
- Regulatory or market concerns with particular product categories or industry sectors
- Current and evolving regulatory environment – submissions procedures, classification changes, evidence requirements, etc.
- Health economics of treatment/device and associated evidence and comparative effectiveness expectations
- Current and evolving reimbursement policies
- Concerns over specific materials, components, treatment, etc.
- Prevalence and consequences of off-label use

Regulatory Strategy – External Factors

Creation of regulatory strategy to align regulatory activities with Business objectives

- Competitive Landscape
  - Who are the potential players? Real vs. potential competitor(s)?
  - Where are they located?
  - Where are they with their respective development(s)?
  - If ahead, how far ahead? If behind, how far behind?
- Regulatory Landscape and Framework?
  - Regulatory environment – is it established, developing, changing, evolving?
  - New requirements/legislations/regulations available vs. projected?
  - Review requirements/ timing/ performance?

Elements of Successful Regulatory Submission



One Page Registration Plan

Creation of one page registration plan with defined contact points with concerned health authorities

- Goal
  - **A well- developed and thought out plan that describes the specific steps and action required to successfully meet the regulatory strategy objectives**
- Purpose
  - To have a high level understanding of the product development program
  - To define the milestones for health authorty(ies) contact during the development program
  - Common and consistent means of communication internally within the project and functional teams
  - Contains the specific elements required to assemble the regulatory submission

Regulatory Strategy – Points for Consideration

- Regulatory strategy is a living document – you must EXPECT change
  - Some examples:
    - Regulations evolve and change
    - Based on additional experience and/or information agencies can change their view on the subject
    - New intelligence on similar product
    - Change in target label or markets
    - Pressure from patients, advocacy groups or media

Regulatory Strategy – Points for Consideration

- Definition of scope
- Defining and differentiating near-term and long-term objectives
- Bridging elements and dependencies between the business and regulatory strategies
- Keeping a focus on the end goal – clinical, product quality, and business
- Identifying influencing elements (internal and external)

Understanding of different perspectives coordinated into a meaningful, effective, resilient guiding strategy

Regulatory Strategy – Execution and maintenance

- Successful execution depends on
  - Detailed project plan
  - Clear designation of organizational roles and responsibilities
    - Internal resources (cross functional team members, project lead, regulatory lead etc.)
    - External resources (consultants, CRO, Advisory committee, Attorneys, Health Authorities)
  - Effective support systems and procedures
  - Effective communication and decision making

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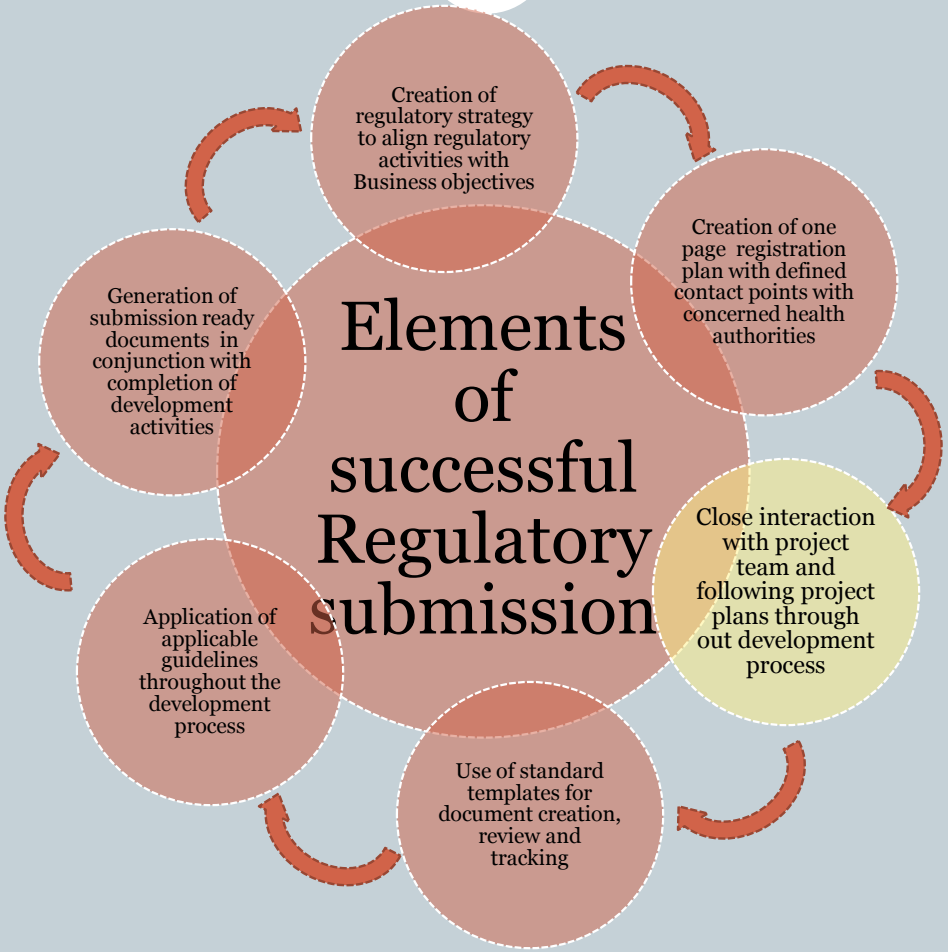

Close Interaction with Project Team

Close interaction with project team and following project plans through out development process

- Purpose
  - To inform and be informed of all project/program level developments with respect to project timelines
  - To identify, discuss, strategize on project/product specific development issues
  - To discuss and decide on the ongoing development pathway
  - To develop internal and external communication strategy
- Elements
  - Project Plans (timing)
  - Project Charter (project deliverables)
  - Budget/Resource requirements and constraints

Close Interaction with Project Team

Close interaction with project team and following project plans through out development process

- Project Plans
  - Detailed, Integrated
  - Identifies key activities, resources, timing
  - Helps to define implement and control project
  - Gantt charts and project management software are useful
  - Started early
  - Communicated
  - Re-visited and revised as often as necessary

Interaction with Project Team – Questions to Consider

Close interaction with project team and following project plans through out development process

- Have the target clinical indication and anticipated labeling claims for your product been outlined as part of a preliminary target product profile?
- Does your current program include consideration of anticipated future approval requirements, e.g., endpoints, comparators, effect sizes, statistical criteria, based on current approval precedents and ongoing competing clinical programs?
- Does your program include consideration of a changing regulatory environment, including implementation of new legislation, guidances, or review requirements?
- Does your program proactively identify challenges or issues that may delay clinical development and also define innovative solutions/approaches to circumvent these challenges?
- Does your program leverage newly accepted development tools to reduce clinical development time and expense and also proactively plan to maximize acceptance of foreign data to access global markets?
- Does you program currently identify key opportunities to engage global regulatory authorities and specify key data requirements to support these interactions?
- Does your program proactively eliminate development risk and uncertainty, while maximizing the potential for commercial success?

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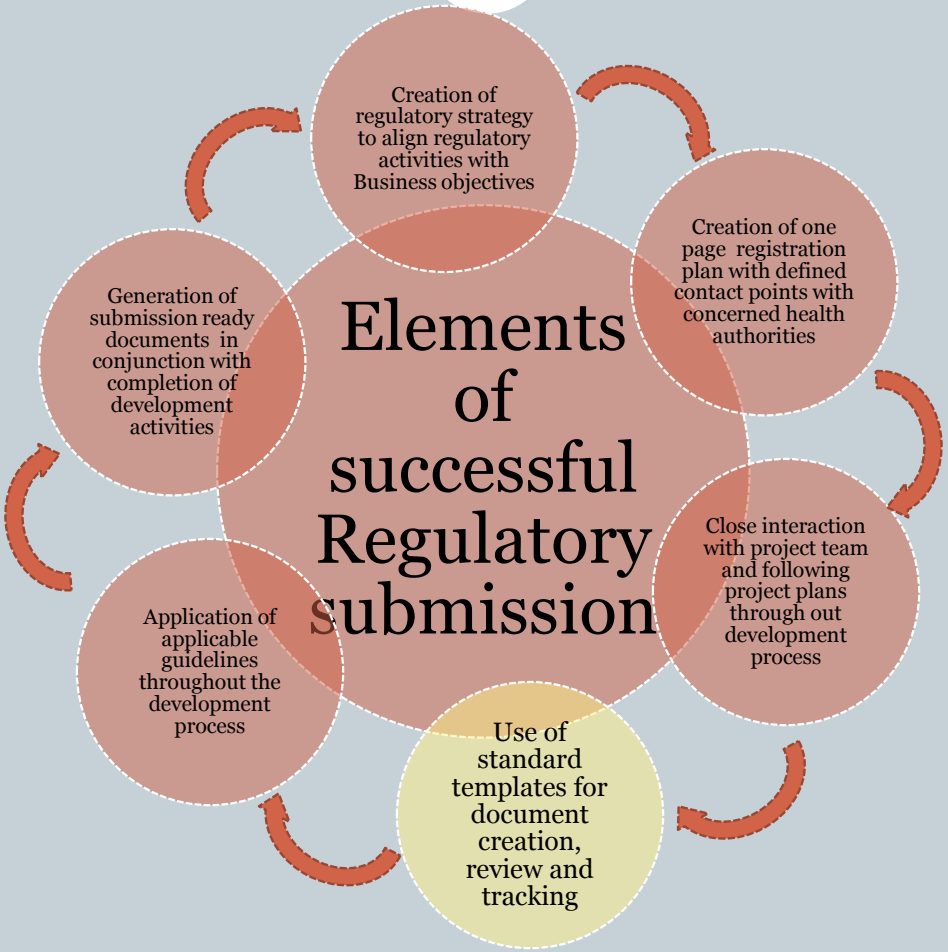

Document Standards and Practices

Use of standard templates for document creation, review and tracking

- Document Mapping
  - Creation of document maps for the specific submission (e.g. CTA/ IND (Phase I, II, III), CTD (Module 2-5)
    - List of all documents categorized by sections of the submission under consideration
    - Identification of source, summary and support documents
- Use of standard formats and templates
  - Develop standard format, word style guide conventions to be used for regulatory submissions
    - Communicate and train the project team members, authors, subject matter experts (SME)
  - Develop templates for all required sections of the intended submission for clarity, completeness, standardization and compliance with the requirements

Document Standards and Practices

Use of standard templates for document creation, review and tracking

- Review flows and timelines
  - Creation and communication of review flows, expectations and timelines
    - Where will the document to review reside? Who will review (internal/external reviewers), in what order and how long?
- Tracking
  - Use of document maps for tracking of the documents in planning, draft, review, completed
  - Tracking of document progress in relation to the submission requirements and project plans
  - Communication to the project team for the status update

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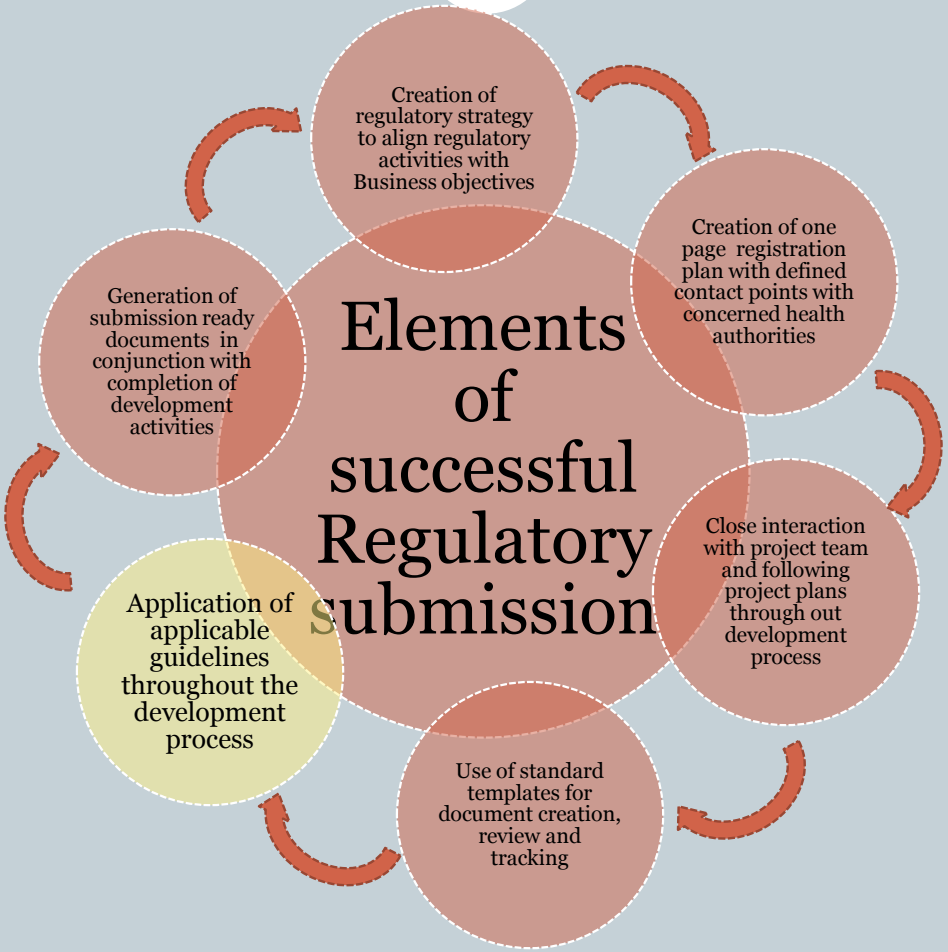

Application of Guidelines

Application of applicable guidelines throughout the development process

Purpose

- Significant streamlining in application processes
- Increased focus on effective and targeted compliance activities
- More consistent application of strong but proportionate enforcement activities

Application of Guidelines

Application of applicable guidelines throughout the development process

- Know and understand the regulatory framework and environment
- Find all applicable guidelines
  - Global (ICH), Key/critical/important, regional/national
  - Share and communicate the key consideration(s) to the project team
- Core to development
  - Get involved and Start early – right first time
  - Retrospective fix-ups take longer (time/cost/resource implications)
- Keep an eye out for the new regulations, directives/ legislations/ guidance
  - Be active and get involved in providing comments to the draft guidelines
- Key to successful submission, review and outcome

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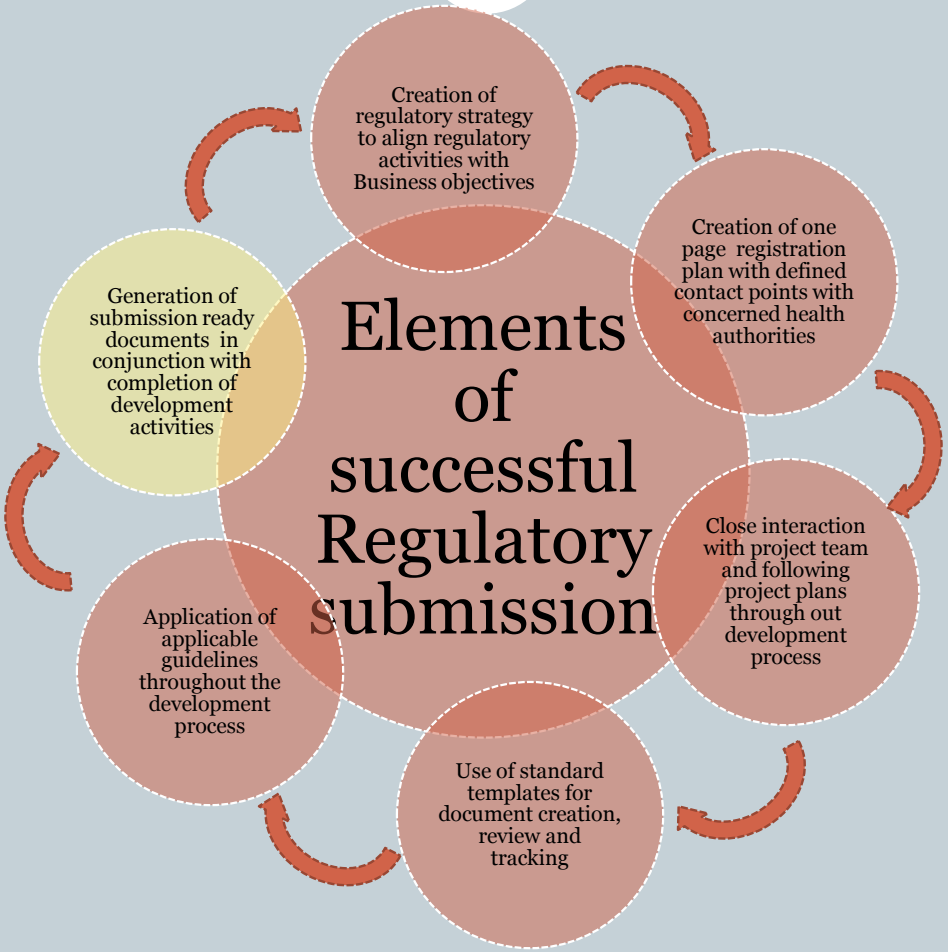
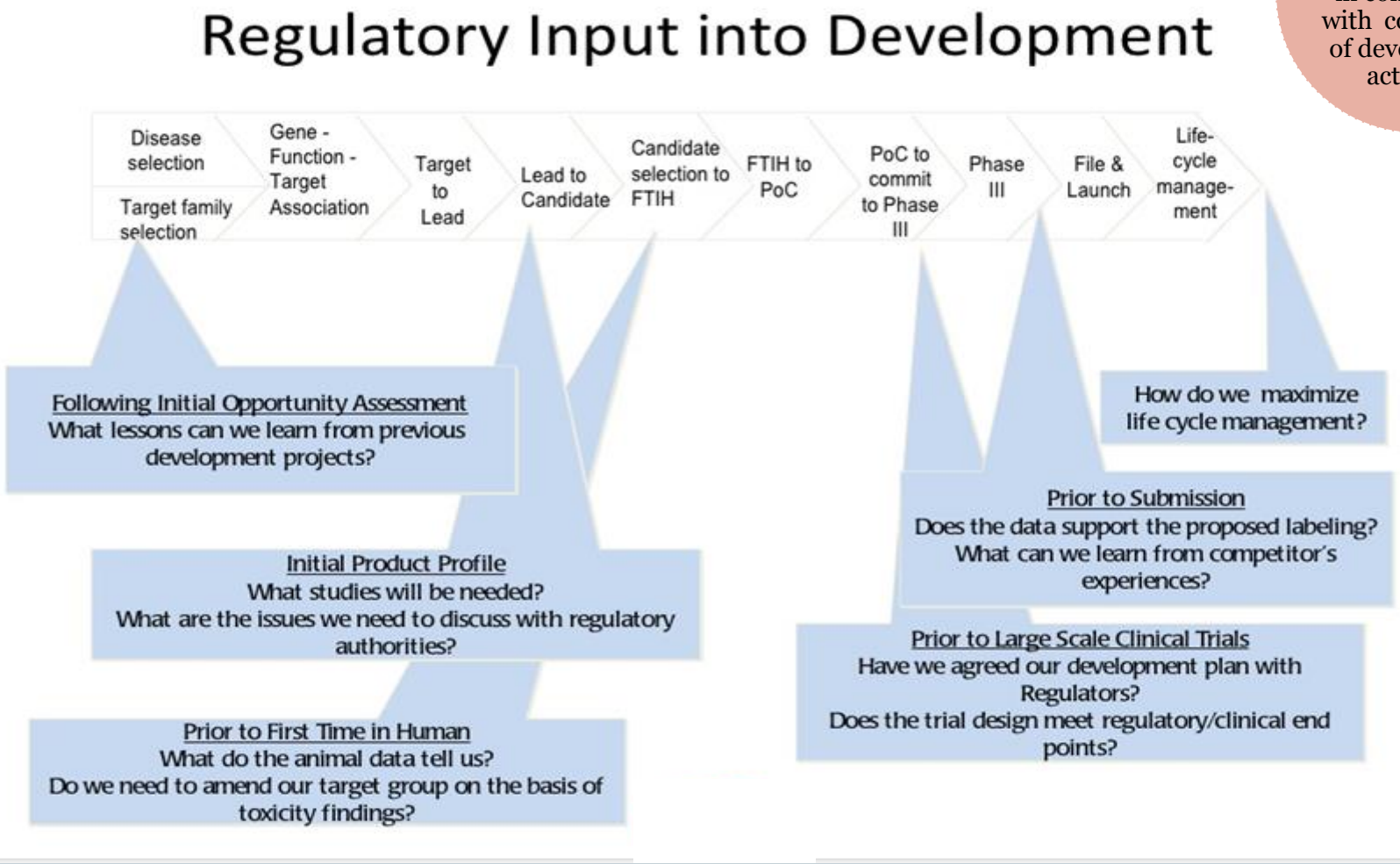


Generation of Submission Ready Documents

Generation of submission ready documents in conjunction with completion of development activities



Generation of Submission Ready Documents

Generation of submission ready documents in conjunction with completion of development activities

Global regulatory strategy does not mean identical processes or documentation

- Obtain and manage documents during development
- Critical for timely application of guidelines/unique or national requirements during development
- Important for introduction of standard practices for document generation, review and tracking
- Key to successful submission, review and outcome

Regulatory Submissions Simplistic Success Formula

- Know the regulations, guidelines and specific requirements
- Develop quality data using appropriate GMP, GCP, GLP, QSR and QbD requirements
- Have well trained staff at all levels
- Build and maintain strong communication links with the regulatory authority before and during the review process
- Submit a well written dossier
- Plan for all post-approval commitments

Questions

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Thank You