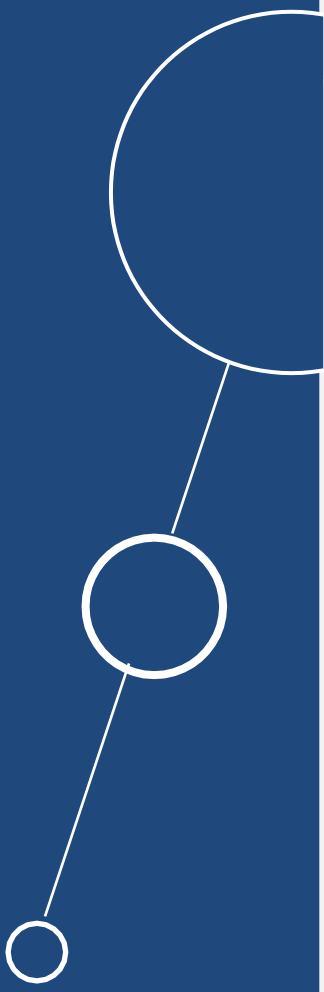
Product Excellence Maturity Model – Assessment Guide

#Acheiving Product Excellence



Interswitch Group

Product Leadership & Agile Governance

The 2nd Edition

Welcome!

Product excellence maturity assessment model is to help our Product Teams evaluate their current level of product management maturity and identify areas where they can improve.

This assessment has been crafted to by combining Business Agility, Product management and DevOPS best practices to come up with a model that caters for the critical elements.

It serves as a compass /tool used by team to assess and benchmark their Product excellence capabilities and practices. The goal is to drive organizations success through product excellence. This entails not only enhancing the organization's ability to build products but doing so with a keen focus on delivering what customers truly need. The end goal is to not just meet but surpass business outcomes, fostering a culture of innovation and responsiveness.

Some specific benefits we are aiming for by using a product excellence maturity assessment model are:

I. **Improved decision-making:** By understanding their current maturity level, teams can make more informed decisions about their product management practices. Decisions like allocation of resources more effectively, prioritized initiatives, and improved overall team efficiency.

II. **Enhanced product quality:** A higher maturity level often leads to higher products quality. This is because teams with more mature product management practices are better able to identify and address customer needs, develop, and test products effectively, and manage the product lifecycle efficiently.

III. **Increased customer satisfaction:** An improved product quality and more customer-centric approach to product management can lead to increased customer satisfaction. This will result in higher customer retention rates, improved word-of-mouth marketing, and increased revenue.

IV. **Improved business performance:** All the above benefits can contribute to an improved business performance at Interswitch. Teams with better products, happier customers, and more efficient processes are likely to be more profitable and successful in the long run.

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Filling out the Assessment

We have developed this assessment guide as a reference for completing the product maturity assessment for teams and products.

An assessment can only be certified completed when all questions in each dimension is completed and the extent to which every scored rating measures up to the acceptable evidence provided in this guide. For each question, there are five levels of rating from which you are required to select the level that best describes the level of your team/product maturity level from the drop-down options on the ***Assessment Score*** column.

It is important to note that for each option selected, there is *Acceptable evidence* that needs to be provided. There shall be a review and validation exercise after the Business/Groups have filled out the assessment.

Acceptable Evidence

The evaluation process for all assessment ratings shall be evidence-based. The evidence submitted must be valid for the period in review but also comprehensive, meeting all the requirements and criteria outlined in the competency standard to achieve the highest rating for that dimension.

Note:

- Any question without evidence will automatically be regularized to a level one (*1-Reactive*).
- To move to a higher maturity level, the evidence for all the preceding level must be met before moving the higher level.
- Acceptable evidence listed below are the criteria standard for any rating.
- Surveys shall be conducted to provide evidence result for some dimensions.

Confluence shall be the location of all evidence for the assessment.

Organizational Assessment

Organizational assessment is a tool that enables Business/Group to assess their processes, environment, and structure as it relates to end-to-end product management. It guides the development of actionable strategies and plans that ensure the organization has the necessary elements that enable teams build products that meet customers' needs or wants and exceed business outcomes.

Agility

Agility is the ability to adapt, respond, and thrive in the face of change and uncertainty. Four (4) enablers of Agility shall be assessed in this maturity model. They are ***Organization culture, Ways of working, Leadership & Management and Governance & Funding***.

Organizational culture

Organizational culture refers to the shared values, beliefs, attitudes, and norms that characterize the Business/Group, shape how team members interact with each other, how decisions are made, and how the team responds to challenges and opportunities. The acceptable evidence for this:

- Rating from the enablers of Agility survey.

Ways of Working

Ways of working (WoW) encompass the frameworks, methodologies, and practices that define how individuals collaborate and execute tasks within Business/Group. The acceptable evidence for this:

- Rating from the enablers of Agility survey.

Leadership & Management

While leadership is about setting the direction and inspiring others to achieve it, Management is about planning, organizing, and controlling resources to get the job done. The acceptable evidence for this:

- Rating from the enablers of Agility survey.

Governance And Funding

Project to Product funding

Away from up-front business cases, detailed plans & outputs towards safe-to-fail experiment, adaptive planning. Below is the acceptable evidence:

- **Level 1 to 2**: List of strategic initiatives, the start date, end date and the status (Active, closed, pivoted, deprioritized or on-hold) of the initiatives for the period in review. The approved budget (the estimated cost) for the project.
- **Level 3**: Lean business cases and MVP defined for each initiative and the progress made (outcomes against the initial hypothesis) and pivot or preserve decision made based on outcome. The approved budget (the estimated MVP cost & forecasted full implementation cost) for the Product.
- **Level 4**: Lean business cases and MVP defined for each initiative and the progress made (outcomes against the initial hypothesis) and pivot or preserve decision made based on outcome. The approved budget (the estimated MVP cost & forecasted full implementation cost) for the Product.
- **Level 5**: List of Portfolios and the corresponding value streams. The approved budget (the estimated MVP cost & forecasted full implementation cost) for the value streams

Lean Governance & Guardrails

The Portfolios have been defined and products & solutions are classified by horizons while guardrails have been defined to guide portfolio investment.

- **Level 2**: List of products and solutions classified by investment horizon
- **Level 3**: List of all your products and their investment horizon classification. The link to defined budget for the different horizons for the period in review. Link to portfolio canvas and portfolio vision.
- **Level 4:** Link to strategic themes define for the portfolio and the quarterly reviews documents showing how teams track portfolio & Value stream KPI in alignment to the strategic themes.
- **Level 5**: Links to Realtime dashboards/tools used to track portfolio and value stream KPI in alignment to enterprise strategy.

Measurement Practices

Measurement practices evaluates how an organization or team collects, analyzes, and utilizes data to inform decision-making, improve performance, and achieve its goals. Effective measurement practices are critical for assessing the performance, progress, and impact of teams, products, and portfolios within an organization. The acceptable evidence for this is:

- **Level 1-4:** The Balance Score Card for all roles, Business outcomes and product outcomes for the period in review
- **Level 5:** Link to real-time dashboards that show how these business outcomes, KPI and product outcomes are tracked.

People

To ensure people are empowered with the necessary skills to excel on the job.

Agile Principles & Practices

Ensure that everyone within the group in trained on Agile principles and practices. The acceptable evidence for this is:

- List of staff in the Business/Group and the Agile trainings done.

Product Principles & Practices

Ensure that all Product manager & their leaders within the group in trained on product principles and practices. The acceptable evidence for this is:

- An analysis by the team of the current List of product managers for the period in review and the corresponding product training, workshops, webinars attended by each product manager. This needs to cover critical areas (e.g., market & user research, product monetization and pricing, product strategy etc.) aligned to the competency level of the role. The detailed list should be submitted as evidence.

Engineer Principles & Practices

Ensure that all engineers (Software Engineer, DevOps, and QA) & their leaders within the group in trained on engineering principles and practices. The acceptable evidence for this is:

- An analysis by the team of the current list of software, DevOps & QA engineers for the period in

review and the corresponding training, workshops done by each engineer. This needs to cover critical areas (e.g., secure coding etc.) aligned to the competency level of the role. The team's self-assessment score and the detailed list should be submitted as evidence.

Onboarding

Onboarding set new team members up for success and improve their overall employee engagement. Below is the acceptable evidence:

- **Level 1 – 3:** The link to the onboarding framework defined for Product, Engineers (Software, DevOps & QA) and Program mgrs. The list of all new joiners to the product team and the onboarding program administered with evidence for the period under review
- **Level 4:** Link to tool used for onboarding administration
- **Level 5:** The tool adopted for the end-to-end onboarding process administration and measurement (From joining the switch, to group onboarding, to team onboarding and finally role specific onboarding).

Competency

Competency assessment and frameworks are critical tools for organizations to evaluate and manage the skills, knowledge, and abilities of their employees. Staffing Competency Gap Assessment is a systematic evaluation of the skills, knowledge, and abilities required for effective staffing functions within an organization, compared to the current competencies of the staffing team. Below is the acceptable evidence for competency:

- **Level 1 – 3:**
    - The link to the competency framework and the competency assessment defined for Product managers, engineers (Software, DevOps & QA) and Program mgrs.
    - Output of competency gap assessment for all roles (Product managers, engineers - Software, DevOps & QA, and Program mgrs.). The document should include the date of the assessment and individual development plans that were derived from the assessment.
- **Level 4:** Link to the Competency assessment and gap analysis for the period in review for Product, engineers (Software, DevOps & QA) and Program managers roles on the team. This should include the date of each assessment and a view to the individual development plans that were derived from the assessment.
- **Level 5:** Link to team competency gap assessment for the period in review.

Processes and Tools

This entails the assessment of the team processes and tools used to implement these processes. It will measure the level of work tools and process integration, monitoring and deeper insights into the level of operationalization and efficiency within the team.

Tools

Tools measures the effectiveness and standardize use of tools and tooling across the team to perform & track tasks towards achievement of specific goals by providing data, facilitating collaboration and enable efficient monitoring / evaluation across various dimensions.

Below is the acceptable evidence for competency:

- **Level 2 - 3:** Links to sprint boards and product boards.
- **Level 4:** Product and portfolio tracking is done through a single tool
- **Level 5:** Tools are evaluated periodically by the enterprise governance board.

Processes

Process measures the level of maturity or effectiveness of the **team**'s product development and management processes.

- The evidence for this section will be the outputs of the product strategy sack section.

Product Assessment

Requirements Approach

A requirement approach is a structured methodology for identifying, analyzing, documenting, and prioritizing requirements for a product. It provides a roadmap for gathering and translating user needs and business objectives into clear, actionable requirements that can be implemented by the development team.

Continuous Intelligence

Continuous Intelligence refers to the use of real-time data, analytics, and automated decision-making processes to enhance and optimize product development, delivery, and overall performance. It involves the continuous collection, analysis, and interpretation of data throughout the product lifecycle, enabling timely and informed decision-making. The acceptable evidence for this:

- **Level 2**: List of metrics & objectives defined, the corresponding data sources.
- **Level 3**: The team defined analytics tools and the links to the qualitative and quantitate insights for the period in review. This should also include the insights gotten and actions taken from such insights.
- **Level 4**: The dashboard/tools used for real-time analytics as well as insights gotten, and actions taken from such insights
- **Level 5**: Links to dashboards on predictive analytics and the insights gotten and actions taken from such insights. This could be in the form of new features, bug fixed, improvements made to the product or new product.

Customer Centricity

Customer centricity measures the extent to which the customer is at the core of every decision and action taken throughout the end-to-end product management lifecycle. The goal is to create and deliver products that better position us to build long-term relationships, enhance brand loyalty, and adapt to changing market conditions including creating exceptional customer experience post launch.
The acceptable evidence for this

- **Level 2**: Links to analysis done on customer complaints & support engagement, the insights gotten, and the action taken (e.g., improvement in product or process etc.) and the product outcomes

achieved after such improvements

- **Level 3**: Link to defined customer persona, customer journey, surveys and experience maps, the insights gotten, actions taken, and product outcomes achieved based on the insights.
- **Level 4:** A description of how the team gather customer /user insight (including tools used for real-time user analytics) as well as the defined cadence teams have for analyzing and reviewing. Evidence of A/B tests done. The insights gotten, actions taken, and product outcomes achieved based on the insights.
- **Level 5**: The defined customer experience for post-launch product, and how teams constantly measure and improve the customer experience This should include the insights gotten (etc. review, customer feedback) the actions taken, and the outcomes achieved.

Product Strategy Stack

The product strategy a powerful tool to help you connect your product team's work with company objectives.

Product Vision

Product vision describe the future you are trying to create. An excellent product vision needs to be persuasive, inspiring, and focused on the customer. Below is the acceptable evidence for product vision:

- A link to the Product vision (this could be a document, video) etc.

*Note** Members of the product team will be selected randomly for a validation interview to prove that the vision has collective ownership*

Product Strategy

Product strategy is about deciding which problems to solve that aligns with achieving the business objectives.

The acceptable evidence for your product strategy document should have the following six critical elements:

- Target Audience
- Problem definition
- Value proposition
- Strategic differentiation

- Monetization strategy & Pricing
- Acquisition / Growth Strategy

To support the critical elements of the product strategy, links to detailed competitor analysis, user research, Market size analysis, Market research is also required as part of the evidence provided.

Product Roadmap

Product roadmap is a high-level visual summary that maps out the vision and direction of your product offering over time. It shows the sequence in which you execute features. The acceptable evidence for this would be:

- **Level 1-5:** Link to the product roadmap

Product Metrics, Goals and Outcomes

Product goal sets the direction, product metrics help track progress and performance, and product outcomes reflect the real-world impact of the product. The acceptable evidence for this would be:

- **Level 1-4:** Link to the defined product metrics, goals, KPI, outcomes as well as how the teams track the these.
- **Level 5:** Link to real-time tracking of Product goals, metrics, KPI and outcomes.

Innovation Approach

Innovation approach refers to the method or strategy that a product team employs to generate new ideas, develop novel solutions, and bring innovative products or features to market.

Innovation Focus

Innovation focus refers to the strategic emphasis and effort placed on creating and delivering innovative products or features to meet customer needs and stay ahead of the competition. The acceptable evidence for this would be:

- **Level 1:** List of product initiatives implemented in the period (product roadmap showing what was delivered).
- **Level 2:** List of product initiatives that can be classified as innovative, with a description of what informed the decision on which problem to solve (links to market research, user research, data points).
- **Level 3:** Product and the new markets & regions the product has been expanded for the period in

review. This should include no of new customers from the region/market & value realized for Interswitch. Also include links to the artefacts and insight gotten from product discovery.

- **Level 4:** List of Product initiatives that were developed where partners can innovate and create value. Also include the value realized for Interswitch.
- **Level 5:** List of Successful Product launches that never existed before that met and exceeded customer expectations as well as the value realized for Interswitch (e.g., no of customers, revenue growth, market share).

Teams

Teams are a group of individuals who come together to work towards a common goal or objective. The focus here cuts across three main dimensions:

- How teams create, store, and maintain documentation
- How teams perform product discovery activities
- The team composition

Documentation

Product documentation that supports the different phases of the end-to-end product lifecycle.
The acceptable evidence for this would be:

- Link to the product documentation space on confluence as well as the corresponding folder on SharePoint for each product. We would be looking out for end-to-end process documentation contents (All the artefacts) from ideation to in-life for your products (i.e., dependent on the phase your product is at the time of review) location of the documents and the quality of maintenance the documents have experienced thru the period (Missing elements within a particular document will be considered low quality).

Product Discovery

Product discovery enables teams to explore and define what to build based on a deep understanding of user needs, market trends, and business goals. It involves researching, ideating, and validating ideas to uncover opportunities and inform the product's direction. The essence of this section is to understand how product teams perform discovery.

The list of the different discovery activities for the period under review including the date, participants & their roles, and the objective (E.g., customer interview, customer survey, assumption testing) as well as the insights gotten. To support the product discovery document, include links to the market

research/analysis, customer research, competitor research, and test results.

Team Formation

Team formation is the process of assembling individuals with diverse skills and expertise to collaborate on a shared goal or objective. Effective team formation is critical for achieving cooperation, where the combined efforts of the team result in outcomes that are greater than the sum of individual contributions. The acceptable evidence for this would be:

- **Level 1 – 4:** The list of product teams and the members of each team and their roles and the KPI for the different teams
- **Level 5:** The defined value stream, the members of each team and their roles and the KPI for the different teams

Technical Excellence

Lead Time for changes (LTC)

Lead time for changes measures the amount of time it takes a commit to get into production**.** Lead Time to Changes metric requires two important pieces of data: when the first commit happened, and when the deployment happened. You will need timestamps for the initial code commit and the code push to production**.** The acceptable evidence for this is:

- **Level 1 - 4**: The Analysis on the number of seconds to successfully deliver a commit to production (***Daily median per month***) and present this analysis as evidence.
- **Level 5**: The link to the dashboard/tool that tracks the Lead time for changes

Deployment Frequency (DF)

Deployment Frequency is a measure of how often engineering teams successfully deploy code to production.

To calculate the deployment frequency, dividing the total number of deployments made in each time (e.g., a month) by the total number of days in that period. For example, if a team deployed codes 10 times in a month with 31 days, the deployment frequency would be 10/31 = 0.32 deployments per day. The acceptable evidence for this would be:

- **Level 1 - 3:** The Deployment frequency Analysis done by the product team as well as the detailed list of deployments showing the product/component name, date of deployment for the period in review.

- **Level 4 - 5**: The link to the dashboard/tool that tracks the Deployment frequency

Change Failure Rate (CFR)

Change failure rate provides visibility into how often a deployment to production needs an immediate fix to address a degradation in product performance or an outage. The Change Failure Rate depends on two things: Number of attempted deployments, and number of resulted in failures in production.

To calculate change failure rates, you need the following:

- The total number of production deployments
- The number of remediation-only production deployments (such as hotfix, rollback, patch)
- The number of production deployments that resulted in an incident

Change Failure Rate = (Total no of failed /Total no of deployment) * 100

The acceptable evidence for this is:

- The team's calculation for CFR, the list of the deployments for the period in review along with the status of each deployment (e.g., success, failed, roll back, roll forward/hotfix).

Application Reliability

Application reliability refers to the ability of a software application or system to perform its intended functions consistently and predictably without failures or errors, meeting user expectations and requirements. Our focus is to ensure that product and components are deployed in a reliable manner, tested, and can operate effectively in event of a disaster. The acceptable evidence for this would be:

- A list of products and its components, the status of deployment to Disaster recovery site as well as the DR Test results for the period in review. A link to the DR test results (including the dates and outcome of DR test) for the period in review should also be included.

Continuous Integration & Continuous Deployment (CI/CD)

Continuous integration (CI) and continuous delivery (CD), also known as CI/CD, embodies a culture, operating principles, and a set of practices that application development teams use to deliver code changes more frequently and reliably.

Build management & Continuous integration

Build management & Continuous Deployment approach refers to the strategy and methodology used to

release and install software applications or updates into a target environment. This area focuses on how product teams deploy their production. The acceptable evidence for this would be

- **Level 2 - 3**: Link to tool used to deploy to the different environments (dev, UAT, staging, prod, sandbox) as well as links that show that application configurations are externalized and versioned.
- **Level 4**: Link to dashboards used to track build metrics and link showing how traceability is baked into code changes and releases.
- **Level 5**: Links to real-time dashboards for CI/CD metrics. Description or link to the team current deployment approach.

Database Changes

Database changes focuses on how we make database changes to our products to ensure database changes are integrated into the CI/CD pipeline or as part of the application installation process automatically. The Acceptable evidence for this:

- **Level 1:** Description of how database changes are made
- **Level 2**: Links to location of versioned database script
- **Level 3**: Links to location of versioned database script as well as the screenshot of CI pipeline or link to the CI pipeline showing the integration of database changes or if the scripts are packaged as part of the installation file
- **Level 4**: Database rollback automated.
- **Level 5**: Link or screenshot that show how the database creation is part of the CI process

Testing

This section focuses on ensuring the teams have the right practices as it relates to software testing. The acceptable evidence for testing is:

- **Level 1**: Link to the manual test scripts
- **Level 2**: Links to automated test runs and unit test code coverage report as well as the quality policy applied for the product
- **Level 3**: Link to the CI/CD pipeline showing integration of automated tests for the product and its components
- **Level 4**: Links to the CI/CD pipeline showing security and performance tests.
- **Level 5**: The link to the document showing the quality metrics defined, how the team keeps track and improvements that have been made for the period in review. Link to the automated smoke test that run-in production after every deployment.

Observability

Observability evidence refers to the data, metrics, and information collected from systems, processes, or applications to enable effective monitoring, analysis, and troubleshooting.

Monitoring

For monitoring, the acceptable evidence

- **Level 1**: List of all product components (applications, dependencies) and the corresponding links to basic uptime monitoring
- **Level 2**: Link to infrastructure monitoring
- **Level 3**: Link Application performance monitoring and database performance
- **Level 4**: Links and approach to how the team monitors application health and the approach the team uses to detect problems early
- **Level 5**: Links to the entire full stack telemetry across all layers across the stack (application, user experience, real-user monitoring, and infrastructure)

How scoring is done

A weighted scoring approach shall be used to measure the teams to a total of 100%. The weights shall be distributed across the two assessment areas as follows:

- Product Assessment - 70%
- Organizational Assessment – 30%

Below is the different dimensions and their respective weightings.

	Assessment Area	Dimension	Weight (%)
1	Product	Requirements Approach	10
2	Product	Product Strategy Stack	20
3	Product	Innovation Approach	12
4	Product	Teams	8
5	Product	Technical Excellence	20
6	Organizational	Agility	8
7	Organizational	People	15
8	Organizational	Process & Tools	7

Glossary of Terms

Term	Definition
Build Metrics	Build metrics are quantitative measures that track the quality, efficiency, and reliability of the software development and deployment process.
Business outcomes	Business outcomes are the results of the actions and decisions made by a business.
Change Failure Rate (CFR)	CFR is the percentage of deployments that cause a failure in production.
Competency Assessment	Competency assessment is the process of evaluating an individual's knowledge, skills, and abilities against a set of pre-defined criteria.
Competency Framework	A competency framework is a structured set of competencies that defines the skills, knowledge, and behaviors required for effective performance in a particular role or organization.
Deployment Frequency (DF)	Deployment Frequency is the frequency at which code is deployed to production.
End-to-end product management lifecycle	The product management lifecycle can be defined as the optimization of product performance through the different product lifecycle stages, from start to end.
Feedback loops	Mechanisms for gathering and incorporating feedback from different stakeholders into the product development process.
Governance and Funding	How money is invested from plan-and-predict to experiment-and-adapt
Budget Guardrails	Lean Budget Guardrails describe the policies and practices for budgeting, spending, and governance for a specific portfolio.
Innovation Approach	A plan of gaining a competitive advantage through the advancement of a product or service.
Investment horizon	An investment horizon refers to the length of time that an investor is willing to hold the portfolio
KPI (key performance indicator)	A measurable value used to track the performance of a team or organization.
Mean Lead Time for changes (MLTC)	MLTC is the amount of time it takes to make a change to a product or service.
Mean time to recovery (MTTR)	MTTR is the time it takes to recover from a production failure.
MVP (minimal viable product)	A minimum viable product (MVP) is a version of a new product with just enough features to satisfy early adopters and provide valuable feedback for future development.
Outcomes	Outcome is a measurable result achieved because of an action or process.
Output	Output is a measurable product of a process or system
Product Discovery	Product discovery is the process that helps product teams uncover customer problems or desires and validate solutions to those problems
Product Outcomes	Measures how the product drives business value
Product Metrics	Product metrics are indicators that show how users interact with a product e.g., activation rate
Product Goals	A product goal is a measurable, time-bound objective that supports your product vision e.g., double product revenue in 6 months
Portfolio	The complete collection of products and services
Product Team	Roles involved in defining, building, testing, launching, and releasing (Engr, Products, QA, Delivery, Design)
Psychological safety	A belief that it is safe to take risks and make mistakes without fear of punishment or humiliation.
Self-organizing	The ability of a team to manage its own work and make decisions without the need for external guidance.

Technical Excellence	The deployment frequency, change failure rate, mean time to recovery, application reliability, code review and commit practices, artifact repository management, release version backups, static code analysis, and automated build processes.
Value stream	A value stream is the set of actions that take place to deliver value to a customer from the initial request through to the realization of value by the customer.
Ways of Working	The methods and processes that an organization uses to get work done.
Work Tools	Tools that are used to support the work of teams, such as product management tools, collaboration tools, and communication tools.

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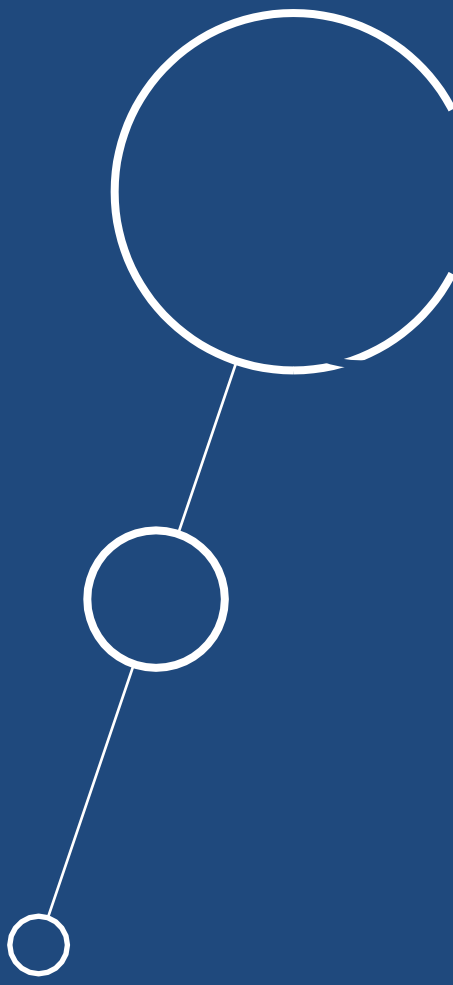

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