



EXECUTIVE SUMMARY

Leading CSPs have been focused on digitalizing the user experience for the last five years, first focusing on sales and then expanding to after-sales support. However, bringing the full benefits of the digital customer experience also requires digitalization of the CSP’s internal processes for new product introduction and further optimization.

Oracle has recently introduced Design and Launch for Communications and the Oracle Enterprise Catalog for Communications, part of the overall Oracle Digital Experience for Communications solution. The solution meets these criteria and have been shown to decrease costs while greatly speeding up the offer design processes without requiring major system transformations or ongoing IT involvement in the processes. With its modern, cloud-native software technology and a growing body of integration standards the digitalization can be done as an add-on to existing digital sales processes or as a full transformation project of integrated sales and offer design processes.

This paper outlines the functions, architecture and technology to support the offer design Process digitalization. Key is the separation of the order-time processes and technology from the design-time in the supporting systems and the support of the multiple job functions in the CSP’s offer design process, without requiring the involvement of the IT organization.

KEY FINDINGS

The New Product Introduction (NPI) process is key to supporting the modern digital sales experience for customers of Communications Service Providers.

New design-time systems can augment the current order-time sales systems and automate the entire new product introduction process, providing a digital experience to the CSP’s marketing department and the host of others involved in new product introduction creation, implementation and support. These dramatically speed the NPI process, while AI-based systems provide proactive intelligence on customer uptake by microsegment, allowing fine-tuning both before and after introduction.

Oracle has recently introduced Design and Launch for Communications and the Oracle Enterprise Catalog for Communications, part of the overall Oracle Digital Experience for Communications solution. It can augment a current digital sales experience with the NPI digital experience, or, if the sales process has not been recently modernized, provide a fully integrated digital transformation of the entire customer and employee experience for new product introduction and sales.

Introduction

The digitalization of the user experience has been underway for a couple of years in leading Communications Service Providers (CSPs), as they have sought to provide the users of communications services with a modern digital experience when investigating, ordering, and using both existing services and new digital services. This has been shown to increase customer satisfaction and decrease churn while reducing operations costs and speeding up the lengthy process of introducing new services¹. But, still remaining are the issues of unknown, and often low, initial offer uptake² and a long process of designing and approving new services within the CSPs' marketing and product management organizations. More recently, efforts to virtualize the network have been underway, driven by the need for greater agility in offering new services and reducing internal network operations costs. These together will allow new services to be introduced, sold and supported faster and less expensively than ever before.



Figure 1. Expanding the Digital Experience to NPI (Ref: ACG Research, 2020)

But to achieve a major increase business agility requires changes beyond the customers' user experience, modernizing the internal business processes of the CSP by digitalization of the employee experience, supplemented by artificial intelligence and a hefty dose of business process automation. Chief among these key processes is the new offer design experience process.

A modern digitalized offer design process will standardize and automate the entire new product introduction process, from original concept (ideation) through implementation of the of service in the network and offering of the service to customers. But it will provide more than the ability to offer and optimize new services quickly and inexpensively. It will also radically change the approach to planning these new offerings using existing massive data stores of prospect information for estimating new product uptake by CSP marketing, aided by artificial intelligence agents.

¹ Modern digital customer interfaces have proven themselves to increase ARPU, while the typical increase of customer satisfaction NPS scores of five points have been shown to decrease churn by about 20%. Meanwhile, the typical time to offer new services has been reduced from two years to several months, with greater reductions to come.

² This problem is often addressed by adopting a "fast-fail" approach.

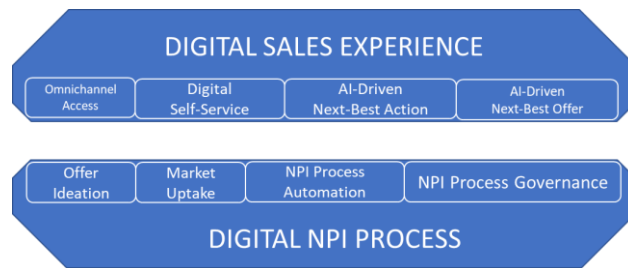


Figure 2. The Digital offer design Process Supports the Digital Sales Process
(Ref: ACG Research, 2020)

This white paper provides a background on the benefits, architecture, and features of supporting the digital sales process with a digital offer design process. It also describes how this can be accomplished by either full user experience transformation or by augmentation of existing digital experience systems.

The Modern Digital Sales Experience

The digital sales experience has emerged over the last decade with advanced features and technologies as shown in Figure 3. The main characteristics of the experience include:

- Omnichannel access – The sales journey, which starts with investigation and ends with an order, often weaves its way through a variety of channels, usually starting with on-line investigation of offerings, checking on reviews and recommendations, discussions with on-line sales representative, and perhaps a visit to a brick and mortar location. Supporting this omnichannel access are sophisticated customer segmentation capabilities, journey guidance agents, and a hefty dose of sales process automation, as well as a common sales catalog and a persistent shopping cart.
- Digital self-service – With the majority of users now preferring digital self-service, the modern sales experience provides web browser-based or app-based digital interfaces that the user controls.
- Next best action analysis and guidance - The customer experience is often guided with next best action capabilities, either directly with the customer or provided to a human or automated attendant. These are usually implemented with an artificial intelligence system that accounts for the customers’ segmentation, the customers’ lifetime value to the CSP, their preferences and those of their friends, their journey so far, and their predicted journey.
- Next best offer analysis and guidance – Based on the customers’ segmentation, customer lifetime value, preferences, journey history, sentiment analysis, buying history and predilections, projected buying probability, and other factors, the AI system will offer an offer customized to the customer.



Figure 3. The Digital Sales Experience Functions, Technology and Data
(Ref: ACG Research, 2020)

Many larger CSPs have already implemented this digital sales experience in their consumer markets, to good effect³. But the majority are still to do so, as this takes a considerable effort to integrate the various siloed systems and processes.

The New Digital NPI Experience

The digital sales experience is geared at the customers and is driven by the customers’ actions. But before the customers can experience a digital sales experience, the services must be created and implemented in the CSPs’ networks and operations via what has traditionally been called the New Product Introduction experience (NPI). Traditionally, this has been a very manually and management-intensive process, requiring many months to complete. The purpose in enhancing the NPI process via a offer design process is to decrease both the effort involved (by both the marketing and IT departments), greatly speed the whole process, and increase the probability of immediate, successful uptake in the market. Figure 4 shows the main features of the process as well as the base technologies that need to be employed.

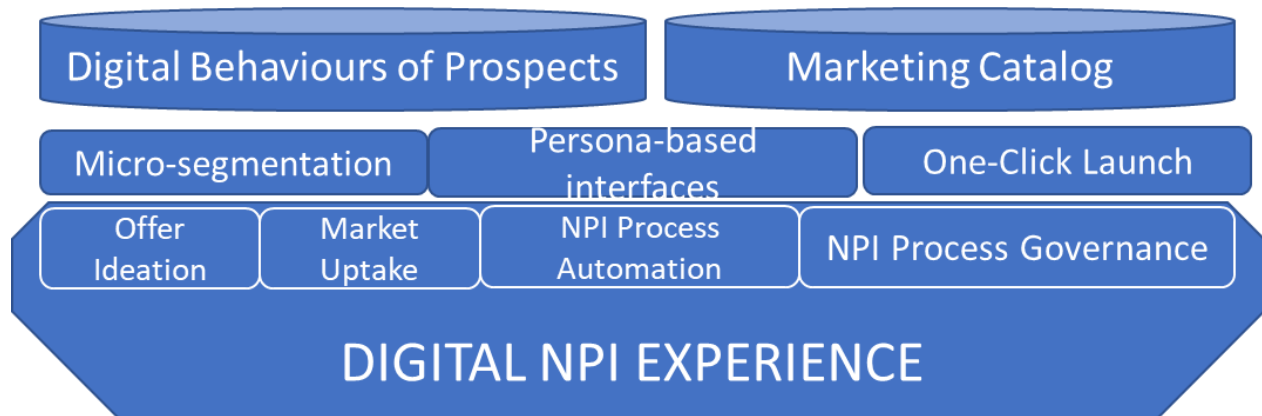


Figure 4. Digital NPI Experience, Functions, Technologies and Data
(Source: ACG Research, 2020)

³ The digital sales experience for business customers has lagged in its development and implementation due to the increased complexity of the processes and the degree of customization often necessary for the medium to large enterprise customers. For SOHO and SMB enterprise customers, the systems used are the same as for the consumer market, but usually employ different sales catalogs, journeys, and human attendants.

Digital OFFER DESIGN Experience Functions

The offer design process is an “offline” internal CSP process, not driven by a customer, but by the marketing department. The main process starts with an idea and ends with the implementation of a new or modified CSP offering – which then is further modified as more experience is gained. The entire process is standardized and automated. The key milestones and success of the offer design process is evaluated by a set of KPIs as a part of an overall governance process run by management. In a modern system, all these steps can be done by the practitioners themselves, requiring no to little involvement from IT professionals. This section describes these functions in detail.

Offer Ideation

Creating an offer requires gathering requirements and matching them against concepts, then turning them into proposals that are evaluated by the various stakeholders and managers, then turned into a set of approved prototypes by product architects and designers. They are then evaluated by marketing specialists and finally approved by executives.

Market Uptake Simulations

Part of the evaluation process is marketing to run the prototypes against a database of prospects to evaluate potential uptake of the offerings. Thus, quantitative estimates of market uptake by segment can be combined with costing estimates to determine potential revenue and profitability.⁴

Offer Design Process Automation

The system itself is the repository for all information about the new offer in the offer design project and its status as it automatically moves through the entire offer design business gate process and into the later stages of the comprehensive product lifecycle management. There are no external spreadsheets nor project management systems with *ad hoc* reports. This standardizes the process and provides all parties with access to the project and product information.

Offer Design Process Governance

Governance features oversee the entire process with critical date tracking, KPIs, and project costing. This allows the offer design process itself to be monitored and optimized over time, with constant improvements in the digital experience.

Supporting the Digital Offer Design Process

Supporting the digital process for offer design requires a host of new technologies that have only come to the required level of maturity within the last five years. These are detailed below:

Database of digital behavior of prospects

Key to being able to estimate the uptake of new products and services is detailed knowledge about not only the current customers, but also individuals and businesses who are not yet customers, but are prospects for the new products and services. These databases are available

⁴ This is as opposed to the recent “agile” NPI proposals that posture that the uptake of new services is so difficult to predict that it is best to make the NPI process so quick and easy that multiple variants can be sorted through in the field with a “fail fast” ethos. This approach combines the best of the fast-fail approach and predictive analytics.

commercially from a number of sources, containing millions of entries on consumer preferences and buying behaviors. Similar databases are available for business for B2B offerings.

Micro-segmentation

As the markets have become more sophisticated and the offerings more competitive, CSPs have found it necessary to move from simple market segmentation models to much more detailed micro-segmentation models. Markets are divided into hundreds or thousands of segments, depending upon consumer feature preferences, consumption models, buying and usage behaviors, and and loyalty characteristics. Micro-segmentation allows targeted offerings to be postulated and tested against the digital twins of these consumers.

Persona-based user interfaces

Since the offer design process touches so many different organizations and employees, automation of the process requires that the different needs of the various users must be addressed. The modern design process calls for implementing general interface capabilities with customization for the various users coming from a set of permissions and options for the various users (which are, of course, fully customizable themselves.) Typical personas that are supported are shown in the table below.

Task by Persona	Capabilities
Marketing initiation of the offer design process	Initiation of a project, instantiation of the organizations and participants, first-order definition of target customers and capabilities.
Creating and Testing Product Requirements and Managing the Ideation Process	Allows employees and stakeholders to collaborate on product innovation ideas and record requirements. Product managers can integrate requirements with concepts in Concept Design Management, and ideas with proposals in Product Lifecycle Portfolio Management.
Managing the Offer Design Process	Collaboration by employees and stakeholders on product innovation ideas and requirements.
Supporting Product Management throughout the process	Create, analyze, manage and revise product portfolios, to arrive at an optimal product mix.
Managing the Design of the Concept by Product Architects, Designers and Executives	Collaboratively generate, capture, analyze, and approve product concepts that address product strategy goals. Approved concepts are transferred directly for prototype planning, detailed design and product introduction.
Optimizing Offerings by Produce Portfolio Managers	Create, analyze, manage and revise product portfolios, to arrive at an optimal product mix.
Tracking Product Development	Track the development processes around products, and enable fast-track commercialization of the right products. Manages changes formally and centrally on items (parts).

Marketing catalog synchronized with product catalog

The TM Forum has released its Open API for integration of catalogs. This open interface can allow the new design-time catalog to integrate with existing order-time product catalogs. This will allow the current product catalog, with its myriad interfaces to other systems, to be used as is for the sales process, with the design-time catalog used during the design processes.

Launch of new services

When ready for release, the entire new product specifications needs to be published, with as much automation as possible. One-click automation is the goal for the handoff between the new offer design and the implementation processes such as adding to the list of products available for sale in the various channels, training the AI models for next best offers for targeted customers, instantiating pricing and bundling options in the revenue management systems, and adding to the support organization's processes for after-sales support.

Implementating the New Offer Design Process

To implement the new offer design process, the best method is to first digitalize the direct user experience and the supporting systems, then follow on with the CSP-user experience.

Phase 1: Create a common sales catalog

First, the CSP should provide a common run-time sales catalog that works across all the channels. This should be integrated into all channels to support both assisted channels as well as the customer self-service interface for investigation, next best offers, offer configurations and pricing options. their also needs to drive the automated service provisioning processto drive drives faster implementation, hence increased revenue.

Phase 2: Create a common enterprise catalog

Next, a common design-time enterprise catalog should be instantiated. Product data from all of the disparate systems (e.g. CRMs, billing systems, other product catalogs) need to be cleaned and migrated to the new enterprise catalog. This new catalog becomes the master catalog for alloffer design processes as well as for the and ordering and implementation catalogs and processes.

Example – Oracle Digital Experience for Communications (DX4C)

Oracle has introduced its new *Oracle Digital Experience for Communications (DX4C)* solution that provides the functions defined earlier. It is a communications-focused offering extending Oracle's CX and industry appcications package. It encompasses a number of previously existing Oracle products and information services along with new functions specific to communications, centering around the product catalog, that work together to provide full lifecycle product lifecycle management, as shown in Figure 5.

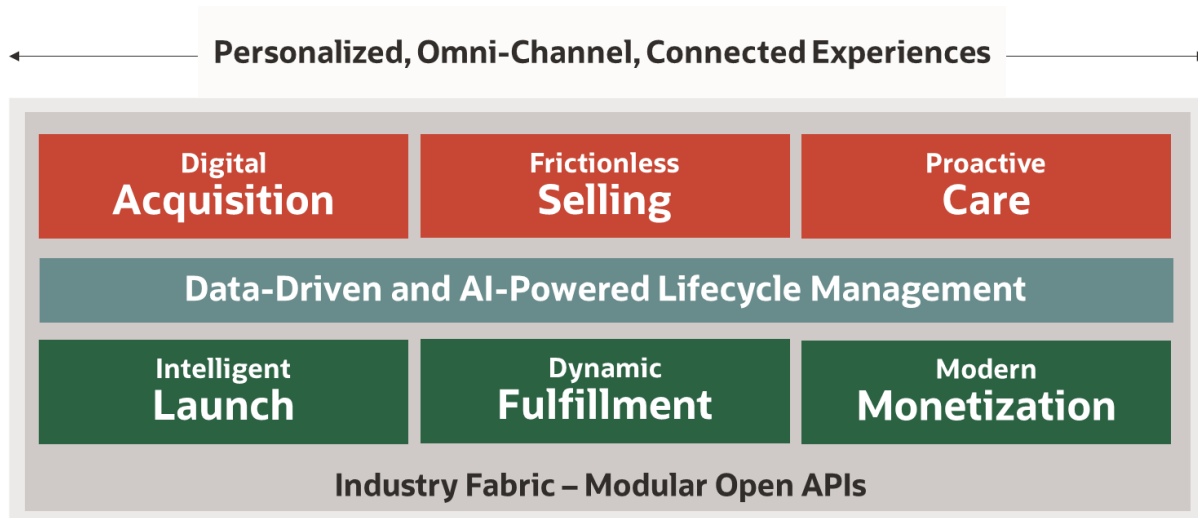


Figure 5. Oracle Digital Experience for Communications (DX4C) Primary Functions
(Source: Oracle, 2020)

Oracle Design & Launch for Communications

A key component of the Oracle DX4C is a comprehensive package for CSPs that provides a fully digitalized experience for CSP employees engaged in the new product introduction. It supports the functions in the three major phases of new product introduction: ideation, creation, and launch. It automates and tracks the process, providing every member of the team immediate status information.



Figure 6. Oracle Offer Design for Communications (Source: Oracle, 2020)

Oracle Enterprise Catalog for Communications

The Oracle Enterprise Catalog for Communications provides a common and consistent definition of product information. It serves as not only the design-time offer catalog (which changes as the NPI process proceeds), but also provides the functions necessary to estimate uptake, gain the input of all

involved members of the NPI process, track the process, and publish the results with a single click – automatically updating the on-line sales catalog.

The Oracle Enterprise Catalog for Communications is based on the TM Forum specifications and supports full offer lifecycle management. As an enterprise catalog, Oracle Enterprise Catalog for Communications is pre-integrated with Oracle’s sales, commerce, fulfillment and billing capabilities and Oracle Siebel CRM for ease of importing catalog information. Oracle Enterprise Catalog for Communications also integrates with external participating systems using the standards-based TM Forum Open API as part of a broader concept to cash to care solution.

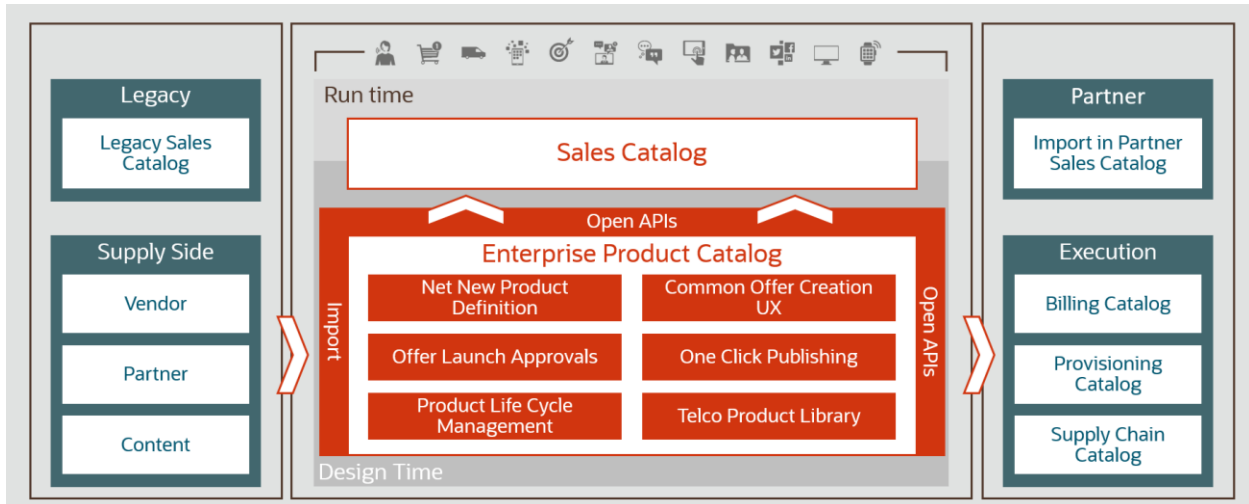


Figure 7. Systems Architecture of Oracle Enterprise Catalog for Communications (Ref: Oracle, 2020)

Oracle Data Cloud

With a global data footprint of more than 100 countries the Oracle Data Cloud serves the ECC for market capture estimates. Since it contains comprehensive information about the digital profiles of consumers and businesses as well as a wealth of ancillary public information, the AI agents in the ECC can estimate their buying behavior. This allows the service designers to optimize the service offerings for the target markets, even before they are introduced.

Implementation Options of the Oracle Design & Launch for Communications Offering

Different CSPs are in different stages of evolution of their digital experience. Some have barely begun the journey, while others have already transformed parts of their customers’ digital experience. Being cognizant of this, Oracle has designed the DX4C solution components to be modular and serve the needs of CSPs, no matter where they are in their digitalization journey, providing both transformational or incremental evolution paths.

Incrementally adding to a current digital customer experience architecture

For CSPs who have already transformed the direct user experience and have a robust sales catalog and digital interface to allow customers to order, modify, and service themselves to the extent they want, the CSPs can add the design-time components of DX4C (primarily the ECC) and integrate it into the existing run-time systems. This brings all the design-time benefits during the NPI process, including one-click implementation of the new service into the run-time sales catalog.

Transforming the customer experience and NPI processes and systems

For those who have yet to implement an overall digital experience for customers, the entire DX4C solution can be implemented.

Conclusions

The benefits of digital experience have proven themselves in interactions with the users as they research and buy products and services by themselves (often in a multi-channel manner) and the CSP automatically implements the services. Such frictionless processes are highly desired by users and bring substantial business benefits to the CSP. Expanding this digitalization concept to the employees of the CSP, especially in the new product introduction process, brings additional business benefits of more targeted services offered faster to the market. Fast-fail can be reduced and turned into fast-success through simulations and a frictionless NPI process that can fine-tune the services after introduction.

CSPs who have already implemented modern digital self-service interfaces and faster product implementation processes should consider an add-on project to transform the ideation and new product design process. Those who have not yet digitalized their new product introduction processes should consider implementing a comprehensive solution that covers both new offer design and instantiation. These can be provided in a SaaS model for fast implementation and minimal disruption.

About the author

Dr. Mark H Mortensen is the principal analyst in ACG Research focusing on Communications Software. He is an acknowledged expert in software for use by Communications Software Providers, with over 40 years experience in OSS and BSS specifications, architecture, marketing, and sales enablement. His work has spanned the gamut of technical work at Bell Labs on the interaction of software operations systems with the underlying network, CMO positions at several software vendors, and as a research director at research firm Analysys Mason. Most recently, Mark has focused on digital transformation for Communications Service Providers and the use of AI, automation, and analytics in transforming the digital experience and automating network operations. He founded Audrine Research in 2018 and works with ACG Research on multi-disciplinary projects.

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