1.1 Darwin applies to the financial ecosystem too

# "It is not the strongest of the species that survive, nor the most intelligent, but the one most responsive to change" - Charles Darwin

Leadership@uote.org



1.3 A BIAN Service Domain is a component for an agile architecture





1.5 A well-designed city plan can support any journey

One static view of the city is a map of the general city layout:





# A dynamic view captures any possible journey through the city:



1.6 Migrating to a well-architected application landscape



1.7 BIAN as 'common language' between other standards and regulations



### 1.8 BIAN Validation Process



# 1.9 BIAN's toolbox to create an agile Banking Architecture

### BIAN – Banking Industry Architecture Network - Framework



# 1.10 Landing page of the BIAN Digital Repository (version 9)

#### BIAN Metamodel\_ Core View Service Domain Landscape **Business Scenarios** Bank Relations THE Dengroup BIAN Service Landscape V9.0 Value Chain View Business Development Card Products BIAN Service Landscape V9.0 Matrix View Channels Corporate Banking Products Q Glossary BIAN Service Landscape V9.0 Overview Corporate Finance (Please Download from Diagrams www.bian.org) Lending Payments Business Capability Map Product and Price 4¢ 00 Business Capabilities Top Level View Retail Banking and Consumer Wealth Semantic API - Generally Usable **Business Capability Detailed Views** Snippets

**4**⇔ 8∎⊡

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#\* 00

### BIAN Banking Industry Architecture Reference Model version 9.0

### 1.11 The BIAN adoption journey, overview



# 2.1 The role of the BIAN Metamodel



# 2.2 BIAN Metamodel, Overview



# 2.3 BIAN Service Landscape, Matrix View

BIAN Service Domain Landscape version 8.1

«BusinessArea» Reference Data	«BusinessArea» Sales and Service		«BusinessArea» Operations and Execution			«BusinessArea»	*BusinessArea+	
«BusinessDomain»	*BusinessDomaine	«BusinessDomain»		<businessdomaine< td=""><td></td><td>Risk and Compliance</td><td>Business Support</td><td></td></businessdomaine<>		Risk and Compliance	Business Support	
KServiceDomains	Channel Specific	Marketing	Loans and Deposits	Product Specific Fulliment     •BusinessDomaine	Trade Banking	*BusnessUcman>  Bank Portfolio and Treasury	*BusinessDomains dll IT Management	«BusinessDomain» dl Finance
Legal Entity Directory 3P	Branch Location Management	Business Development d <sup>0</sup>	*ServiceDomaine di Loen de	eServiceDomaine	«ServiceDomain» # Letter of Credit of	*ServiceDomains	eServiceDomains	KServiceDomains     Financial Statements
Customer Profile dP	eServiceDomain> de Contact Center Management dP	KServiceDomainx ∰ Brand Management d <sup>o</sup>	*ServiceDomains	Investment Portfolio Planning	«ServiceDomain»	*ServiceDomain»	«ServiceDomain»	«ServiceDomain»
«BusinessDomain»	ServiceDomains	«ServiceDomain»	«ServiceDomain»	Investment Portfolio Analysis of	«ServiceDomain»	Corporate Treasury do	IT Standards & Guidelines de	Financial Control 30
«ServiceDomains	«ServiceDomain»	«ServiceDomain» "ff	Current Account	«ServiceDomain»	Trade Finance	Asset Securitization dP	Systems Administration dP	Financial Compliance dP
*ServiceDomaine	E-Branch Management	Promotional Events do	Deposit Account	«ServiceDomain»	Credit Management of	Asset & Liability Management	Orvelopment Environment	KServiceDomainx     Enterprise Tax Administration #
Syndicate Management	Advanced Voice Services Management dP	Prospect Campaign Management d	«ServiceDomains     Corporate Current Account      —	eTrading Workbench of	*ServiceDomains di Credit Facility d <sup>0</sup>	«ServiceDomain»	«ServiceDomain»	«BusinessDomain»
*ServiceDomains Interbank Relationship Management dP	ATM Network Management	«ServiceDomains de Prospect Campaian Desian de	*ServiceDomaina	Investment Account dP	*ServiceComains	«ServiceDomaina	«ServiceDomaineff	Human Resource Management «ServiceDomain» #E
KServiceDomains Correspondent Bank Relationship	«ServiceDomain»	«ServiceDomain»	sServiceDomainaEl		sServiceComains	Bank Portfolio Administration	Production Release and	Human Resources Direction
«ServiceDomain»	Contact Center Operations de	Customer Campaign Management de	Corporate Loan		Limit & Exposure Management	*Stock Lending/Repos	eServiceDomaine de System Deployment dP	Employee Assignment
Correspondent Bank Data Management 🖉	Branch Location Operations dP	Customer Campaign Design dP	*ServiceDomains Corporate Deposits de		*ServiceComain* # Syndicated Loan #	«BusinessDomaine	Systems Operations	KServiceDomainx     Employee Data Management
Sub Custodian Agreement	eServiceDomains	«ServiceDomain» de Customer Surveys de	*ServiceDomains	*Businessuomarrive dell Wholesale Trading	«ServiceDomain»	*ServiceDomaina	«ServiceDomain»	«ServiceDomain»
KServiceDomains		-Duralization and	*ServiceDomaina	eServiceDomaine d Trading Book Oversight of	«ServiceDomain»	Market Risk Models dP	Platform Operations dP	Employee/Contractor Contract
«ServiceDomain»	«ServiceDomain»	Sales	Merchandising Loan dP	eServiceDomains d Trading Models dP	Direct Debit Mandate dP	Financial Instrument Valuation Models dP	Systems Help Desk of	Employee Certification dP
*ServiceDomains	ATM Network Operations	*ServiceDomain*	*ServiceDomains dill Mortgage Loan dP	«ServiceDomain»	Direct Debit dP	«ServiceDomain» d Gap Analysis dP	Systems Assurance	KServiceDomains     Employee Evaluation     d
Contractor/Supplier Agreement	eServiceDomains III Branch Currency Management of	«ServiceDomain»	*ServiceDomains de Fiduciary Agreement de	Dealer Workbench de	«ServiceDomain»	«ServiceDomains	eServiceDomaine	«ServiceDomain»
«BusinessDomain» d	eServiceDomaine Branch Currency Distribution	«ServiceDomain»	*ServiceDomains	Quote Management dP	«ServiceDomain»	*ServiceDomains	During During	Employee Payrol & Incentives 30
*ServiceDomains	«ServiceDomain»	Lead/Opportunity Management	Calvings Account	eServiceDomaine di Suitability Checking de	Pactoring 30	Liquidity Risk Models of	Non-IT and Non-HR Enterprise Services	Travel & Expenses dP
Information Provider Operation dP	Product Inventory Item Management of	KServiceDomains di Customer Campaign Execution de	«BusinessDomain» dill Cards	«ServiceDomain»	eBusinessDomaino	*ServiceDomains dil Economic Capital de	eServiceDomains de Legal Compliance of	ServiceDomaine     Employee Access     dP
Market Information Management	Product Inventory Distribution	KServiceDomains	*ServiceDomains Credit Card dP	eServiceDomaine	«ServiceDomain»	*ServiceDomains	eServiceDomains	«ServiceDomain»
KServiceDomains     Financial Market Analysis     P		«ServiceDomain»	ServiceDomains	Market Making of	Mutual Fund Administration 30	«ServiceDomain»	«ServiceDomain»	eServiceDomaine
*ServiceDomains	eServiceDomains	Sales Planning d <sup>o</sup>	*ServiceDomains	«ServiceDomain» ∰ ECM/DCM o <sup>®</sup>	Hedge Fund Administration	Customer Behavior Models dP	Security Advisory dP	Workforce Training
«ServiceDomain»		Underwriting d <sup>0</sup>	Card Capture 2	«ServiceDomain»	ServiceDomains Unit Trust Administration	Fraud Model d	Security Assurance do	«ServiceDomain» Recruitment dP
Quant Model 20	*BusinessDomaine Cross Channel	«ServiceDomain» de Commission Agreement de	Card Billing & Payments	«ServiceDomain»	«ServiceDomain»	«ServiceDomain» de Credit/Margin Management de	Approved Supplier Directory	«BusinessDomain»
*ServiceDomains Market Data Switch Administration	eServiceDomain> # Party Authentication #	«ServiceDomain»	*ServiceDomains Merchant Relations d <sup>0</sup>	Traded Position Management dP	«ServiceDomain»	*ServiceDomains	«ServiceDomain»	Knowledge and Intellectual Property «ServiceDomain»
*ServiceDomains	«ServiceDomain»	«ServiceComain»	*ServiceDomains	Market Order dP	Order Allocation	*ServiceDomaina #	«ServiceDomaine	Management Manual
«ServiceDomain»	«ServiceDomain»	Product Matching	Aserica Domaina	«ServiceDomain» Market Order Execution dP	Settlement Obligation Management do	Operational Risk Models	Company Billing & Payments	Intellectual Property Portfolio dP
elemine Demain	Point of Service de	Product Expert Sales Support d <sup>0</sup>	Card Network Participant Facility		Securities Delivery & Receipt	Contribution Models of	ServiceDomains     Fixed Asset Register     a <sup>p</sup>	«ServiceDomain» Knowledge Exchange dP
Counterparty Administration dP	Servicing Event History dP	«ServiceDomain»	eBusinessDomaine     Corporate Financing and Advisory Services	BusinessDomaine     Consumer Services	«ServiceDomain»	«BusinessDomaine	+BusinessDomain+	«BusinessDomain»
«ServiceDomain»     Public Reference Data Management     d	≪ServiceDomain> Contact Routing ∂P	«ServiceDomain»	*ServiceDomaine	Corporate Trust Services	Securities Fails Processing	*ServiceDomaina	ServiceDomaine	Corporate Relations
«ServiceDomain»	«ServiceDomain»	Sales Product dP	«ServiceDomain»	«ServiceDomain»	Trade/Price Reporting	Segment Direction dP	Property Portfolio of a	Corporate Communications
Country Data management gr	«ServiceDomain»	eBusinessDomaine d	M&A Advisory gP	«ServiceDomain»	«ServiceComain» d Custody Administration dP	Product Portfolio dP	Site Operations of	Corporate Alliance/Stake Holder
«BusinessDomain» dell Product Management	Interactive Help	«ServiceDomain»	Corporate Tax Advisory of	Bank Drafts & Travelers Checks	«ServiceDomain»	«ServiceDomain» d Customer Portfolio dP	eServiceDomaine de Site Administration de	«ServiceDomain»
*ServiceDomains	eServiceDomain» d Contact Handler d <sup>P</sup>	«ServiceDomain»	*ServiceDomains	eServiceDomains	«ServiceDomain» ,ff	*ServiceDomains	eServiceDomaine	«ServiceDomain»
*ServiceDomains	eServiceDomaine	Customer Product and Service Eligibility of	*ServiceDomaine	«ServiceDomain»	Financial Instrument Valuation	*ServiceDomaine	eServiceDomaine	Regulatory & Legal Authority
Product DeploymentP	eServiceDomain»	Customer Agreement	Private Placement dP	«ServiceDomain»		Channel Portfolio	Equipment Administration	Investor Relations
Product Training dP	Servicing Activity Analysis dP	Sales Product Agreement		Customer Tax Handling dP		«ServiceDomains       Gompetitor Analysis	eServiceDomains de Utilities Administration de	«BusinessDomain»
KServiceDomains     Product Quality Assurance     P		«ServiceDomain»		Consumer Advisory Services dP		*ServiceDomains	eServiceDomains	«ServiceDomain»
KServiceDomains		«ServiceDomain»		Contraction Contra		«ServiceDomain»	aBusinessDomeira	Corporate Strategy 30
«ServiceDomain»		Customer Behavioral Insights do		«ServiceDomain»		Market Analysis dP	Business Command and Control	Corporate Policies
Product Directory 30		Customer Credit Rating		Jervie Hunter		Contribution Analysis of	Organization Direction dP	*ServiceDomain* # Products & Services Direction #
Special Pricing Conditions		«ServiceDomain» H Account Recovery d					sServiceDomains ∰ Business Unit Financial Analysis dP	ServiceDomains     Business Architecture
		«ServiceDomain»		*BusinessDomain*	A.	«BusinessDomain»     Regulations and Compliance	eServiceDomaine     Business Unit Figuration	«ServiceDomain»
		sServiceDomaine R	«BusinessDomain» di Payments	Cross Product Operations	«BusinessDomain» diff	«ServiceDomain»	«ServiceDomain» "A	Continuity Planning
		Party Reference Data Directory of	*ServiceDomains Payment Execution P	Account Management	*ServiceComain*	*ServiceDomains	Business Unit Accounting	«BusinessDomain» Document Management and Archive
			*ServiceDomains # Financial Message Analysis #	Position Keeping aP	«ServiceDomain»	Regulatory Compliance	Business Unit Direction	«ServiceComain» di Document Library d <sup>0</sup>
		«ServiceDomain»	*ServiceDomaina	eServiceDomaine ∰ Position Management dP	Issued Device Tracking dP	*ServiceDomains Compliance Reporting dP	eServiceDomaine	«ServiceDomain»
		e	Financial Gateway of	«ServiceDomain»	Disbursement dP	*ServiceDomains		«ServiceDomain»ff
		eBusinessDomaine	Correspondent Bank of	eServiceDomaine	«ServiceComain» Open Item Management op	*ServiceDomains		Correspondence
		«ServiceDomain»	*ServiceDomaine Payment Order	Securities Position Keeping	«ServiceDomain»	Fraud Resolution dP		
		«ServiceDomain»	*ServiceDomaine	eServiceDomains de Reward Points Account de	County non-resident of a	Financial Accounting of		
		Customer Case Management	*ServiceDomaine	«ServiceDomain»				
		Case Root Cause Analysis	Central Cash Handling	eServiceDomaine	Customer Billing dP			
		«ServiceDomain»	ACH Fulfilment	Account Reconciliation of	«ServiceDomain»			
		«ServiceDomain»	*ServiceDomains	Counterparty Risk of	«ServiceDomain»			
		eServiceDomains	*ServiceDomains	eServiceDomain»	Channel Activity Analysis dP sServiceDomains dF			
		Servicing Order	«ServiceDomains (f)	eServiceDomains	Channel Activity History			
		«ServiceDomain» de Servicing Mandate de	Card Financial Settlement	«ServiceDomain»ff	«ServiceDomain» Card Transaction Switch			
		*ServiceDomains #		Fraud Diagnosis aP	*ServiceDomain*			
			«BusinessDomaina rR	Fraud Evaluation	«ServiceDomain»			
			Collateral Administration		Card Collections a <sup>0</sup>			
			Collateral Allocation Management					
			*ServiceDomains Collateral Asset Administration					
			*ServiceDomains					

# 2.4 BIAN Service Landscape, Matrix View

#### BIAN Service Domain Landscape version 8.1

Business Management	Finance & Risk Management	Group Treasury	Market Risk	Credit Risk	Compliance		Channels
Corporate Relations     Business Direction     «ServiceDomain»	Financial Control Operational Risk	eServiceDomain»	«ServiceDomain» Credit/Margin Management ∂	*ServiceDomain» # Credit Management #	«ServiceDomain» Regulatory & Legal Authority		
Investor Relations de Corporate Policies de	Financial Control dP Company Billing & Payments dP Business Risk Models	eServiceDomain>	«ServiceDomain»	«ServiceDomain»	«ServiceDomain»		
*ServiceDomains de Corporate Relationship de Corporate Strategy de	«ServiceDomain»  Generational Risk Models	Corporate Treasury Analysis	Gap Analysis dP	Counterparty Risk dP	Regulatory Compliance of		1
«ServiceDomain»  Composite Aliance/State Holder	«ServiceDomain» de «ServiceDomain» de eServiceDomain»	Bank Portfolio Administration	Limit & Exposure Management	Fraud Resolution oP	Regulatory Reporting dP		
«ServiceDomain» # «ServiceDomain» #	Financial Statements d <sup>o</sup> Enterprise I ax Administration d <sup>o</sup> Production Risk Models	eServiceDomains f Bank Portfolio Analysis eP	«ServiceDomain» d Position Management dP		«ServiceDomain» dff Guideline Compliance dP		
Corporate Communications		«ServiceDomain»	«ServiceDomain»		«ServiceDomain»		
Corporate ServiceJomana Human Resources Direction		Asset Secuntization of	Economic Capital do		Compliance Reporting dP		
Legal Compliance de «ServiceDomain»	Operations Product	18				Customers Party Reference	Information Providers
«ServiceDomain»	«ServiceDomain»	Market Onerations		Markat Trading		«ServiceDomain» Legal Entity Directory	«ServiceDomain»
«ServiceDomaine de Asset & Liablity Management de	Settlement Obligation Management @ Cheque Processing @	«ServiceDomain»	«ServiceDomain»	«ServiceDomain»	«ServiceDomain»	«ServiceDomain»	eServiceDomain»
Security Advisory dP «ServiceUomarix» di Property Portfolio dP	eServiceDomans de eServiceDomans de Order Allocation de ACH Fulfilment de	Trading Book Oversight 30	Credit Risk Operations de	Traded Position Management of	Quote Management de	Party Reference Data Directory do	«ServiceDomain»
Security Assurance de	eServiceDomaine     Correspondent Bank Data     Correspondent Bank Data	Trade Confirmation Matching 20	Securities Fails Processing	Market Order of	Market Making dP	Location Data Management op	Financial Market Research
«ServiceDomain» Continuity Planning	«ServiceDomain» d «ServiceDomain» d	Securities Delivery & Receipt	«ServiceDomain»	«ServiceDomain» Market Order Execution ♂	«ServiceDomain» Program Trading	Investment Services	Financial Market Analysis
	Counterparty Administration de Payment Order de	«ServiceDomain»	«ServiceDomain»	«ServiceDomain»	«ServiceDomain»	*ServiceDomain* # Consumer Investments dP	Market Information Management
Unit Management	Correspondent Bank dP Payment Execution dP	Traderinnce Reporting 30	Corporate Action dP	vSeniceDomaine rfl	Stock Lending/Repos	«ServiceDomain»	Market Data Switch Operation
«ServiceDomain» de serviceDomain» de Business Unit Direction de Business Unit Financial Operations de	«ServiceDomain»	Corporate Finance «ServiceDomain»	«ServiceDomain»	Suitability Checking of		«ServiceDomain»	«ServiceDomain» # Information Provider Operation &
«ServiceDomain»	«ServiceDomain»	ECM/DCM	Unit Trust Administration	Advisory Services		Investment Portfolio Planning	Cross Channel
Business Unit Management and Business Unit Accounting and	Card Financial Settlement	«ServiceDomain» Private Placement dP	«ServiceDomain» Hedge Fund Administration of	«ServiceDomain» ∰ M&A Advisory oP	«ServiceDomain» Corporate Tax Advisory	Investment Portfolio Analysis	«ServiceDomain»
Business Unit Financial Analysis de	Custody, Collateral & Documents	«ServiceDomain»	«ServiceDomain»	«ServiceDomain»	«ServiceDomain»	Network Portfolio Management	«ServiceDomain»
Human Resources	Custody Administration dP Collections dP	Public offering 30		Corporate Prinance de	Consumer Auvisory Services av	Relationship Management	«ServiceDomain»
S «ServiceDomain» Recruitment do Employee Payroll & Incentives do	«ServiceDomain» # «ServiceDomain» # Collateral Allocation Management # Document Library #	«ServiceDomain»	«ServiceDomain»	«ServiceDomain»	«ServiceDomain» eff)	«ServiceDomain»	Contact Routing dP «ServiceDomain» #
S «ServiceDomain» # «ServiceDomain» #	«ServiceDomain» # «ServiceDomain» #	Loan 🖉	Consumer Loan de	Trade Finance de	Letter of Credit dP	«ServiceDomain»	Session Dialogue de serviceDomaine de
Employee Assignment of Employee Benefits of	Consteral Asset Administration of Archive Services of	«ServiceDomain» # Corporate Loan &	*ServiceDomain* # Mortgage Loan 6	«ServiceDomain» di Bank Guarantee de	Bank Drafts & Travelers Checks	Customer Behavioral Insights do «ServiceDomain» .ff	Customer Profile
Employee Evaluation de Workforce Training de	Account Recovery de Investment Account de	«ServiceDomain» ∰ Corporate Lease →	«ServiceDomain» d	Corporate Banking		Customer Credit Rating P «ServiceDomain» #	Party Authentication
«ServiceDomain» de «ServiceDomain» de Employee Certification de Travel & Expenses de	Accounting Services	«ServiceDomain»	«ServiceDomain»	«ServiceDomain» de Corporate Current Account de	«ServiceDomain» di Direct Debit Mandate de	Customer Agreement	Customer Access Entitlement
«ServiceDomain» d «ServiceDomain» d	«ServiceDomain» Position Keeping → Customer Tax Handling →	Leasing Item Administration	Leasing 2	«ServiceDomain» Cash Management & Account	«ServiceDomain»	Sales Product Agreement dP	«ServiceDomain» # Transaction Authorization @
Employee/Contractor Contract of Employee Access of	«ServiceDomain» de «ServiceDomain» de	eServiceUomains ⊞ Syndicated Loan dP	*ServiceDomain> III Deposit Account of	a <sup>8</sup> ensiaeDemains rff	SepterDension f	Customer Product and Service	«ServiceDomain» ff Channel Activity History of
Employee Data Management	eServiceDomaine c	«ServiceDomain»	«ServiceDomain»	Corporate Trust Services	Cheque Lock Box of	«ServiceDomain» Customer Proposition of	Channel Specific
Platform Operations	Accounts Receivable	«ServiceDomain»	«ServiceDomain»	≪ServiceDomaine ∰ Credit Facility dP	«ServiceDomain» Factoring	«ServiceDomain» Customer Event History	«ServiceDomain»
«ServiceDomain» Systems Assurance P Internal Network Operation P	«ServiceDomain» # «ServiceDomain» # Account Reconciliation #	Underwriting P	Corporate Deposits of	«ServiceDomain»			«ServiceDomain» d
«ServiceDomain» d «ServiceDomain» d	«ServiceDomain» de ServiceDomain» de ServiceDomain» de ServiceDomaine de ServiceDomaine de ServiceDomaine de Service De S	Cards	«SeniesDemoire di	Project Finance d <sup>0</sup>		Sales «ServiceDomain» (	Branch Location Operations de «ServiceDomains
«ServiceDomain»	Reward Points Account de Securites Position Reeping de	Credit Card dP	Merchant Relations dP	Consumer Banking «ServiceDomain»	«ServiceDomain»	Customer Campaign Execution de «ServiceDomain» di	eServiceDomaina d
Systems Operations de Systems Help Desk de	Operational Services	«ServiceDomain» Card Authorization dP		Current Account	Trust Services de	Lead/Opportunity Management	E-Branch Operations
Buildings & Equipment	Customer Billing dP Product Combination dP	«ServiceDomain»	«ServiceDomain»	«ServiceDomain» d Brokered Product dP	«ServiceDomain» Payment Initiation	Prospect Campaign Execution	Financial Gateway do
eServiceDomain*  Fixed Asset Register		Card Capture do Ca	«SeniceDomaine rB)	«ServiceDomain»	«ServiceDomain»	Party Lifecycle Management	Card Terminal Administration
«ServiceDomain» de serviceDomain» de Procurement de Site Operations de	«ServiceDomain»	Card Billing & Payments dP	Merchant Acquiring Facility	«ServiceDomaine .rfl	Currency Exchange 3*	*ServiceDomain> # Product Sales Support #	«ServiceDomain» # Card Terminal Operation @
«ServiceDomain»	«ServiceDomain»fl «ServiceDomain»fl			Sales Product of		*ServiceDomain»	«ServiceDomain» f
Equipment Administration de Site Administration de	Open item Management de Issued Device Tracking de					«ServiceDomain»	
ServiceUomarite     Equipment Maintenance     P     Building Maintenance     P						«ServiceDomain»	
	«ServiceDomain»					«ServiceDomain»	
						Special Pricing Conditions	Servicing
	External Agency «ServiceDomain» # «ServiceDomain» #					Customer Care «ServiceDomain» (ff)	«ServiceDomain»
	Interbank Relationship Management  Product Broker Agreement					Servicing Mandate P *ServiceDomaina	eServiceDomain»
	Correspondent Bank Relationship					Servicing Order	«ServiceDomain»
	«ServiceDomain» de ServiceDomain» de ServiceDomain»					Customer Case Management	«ServiceDomain»
	«ServiceDomain» # «ServiceDomain» #					«ServiceDomain» Customer Case d <sup>P</sup>	Servicing Issue of «ServiceDomain» .ff
	Product Service Agency de Contractor/Supplier Agreement de					«ServiceDomain» de Card Case de	Servicing Event History
						*ServiceDomain»	Distribution
Project Development							Product Inventory Distribution
Alereter Street Control Contro							
«ServiceDomain»	eServiceDomains de Cardena de Car	«ServiceDomain» de serviceDom	main» d	iness Development	t Research	nel Portfolio de Branch Location Management de	eServiceDomains H Correspondence P
«ServiceDomain» ,fl «ServiceDomain»		«ServiceDomain» ,ff «ServiceDomain»	maine de Cu	ServiceDomain» de servi ustomer Portfolio de Marke	iceDomain» di «Serv et Analysis de Bran	nceDomain» de «ServiceDomain» de ATM Network Management de	
Management Manual 20 Customer Behavior Models	eServiceDomains     Systems Administration	Product Design de Product Tra	aining and es	ServiceDomain» d «Servi	iceDomain»	nceDomain» d «ServiceDomain» d	
*ServiceDomaine de Credit Risk Models	eServiceDomains de Development Environment de	ServiceDomain     Production Release     O     O     Case Root Caus	re Analysis d <sup>o</sup>	ServiceDomains _ff	ceDomaine de contact Ce	viceDomains	
Knowledge Exchange     Knowledge Exchange	Market Risk Models de ServiceDomaine	«ServiceDomain» # «ServiceDom Product Decivrent # Product Dire	main» d Se	egment Direction 🔗 Customer Carr	npaign Management 🛷 Servicing	Activity Analysis	
	«ServiceDomain»	«ServiceDomain»	eS Bra	ServiceDomain» de eservi	ceDomain» # «Serv Campaign Design # Financial M	riceDomain» # «ServiceDomain» Message Analysis & E-Branch Management &	
		Discount Pricing dP	45	ServiceDomain» de Brosservi	ceDomain» de Chonnel	Arthity Analysis	
				ServiceDomain» (ff) «Servi	iceDomain»	iceDomain» d «ServiceDomain» d	
				Advertising of Prospect C	ampaign Design of Information Pro	ovider Administration 🖉 Central Cash Handling 🧬	
			eS Pro	serviceUomain» de serviceUomain» «ServiceUomain» custor omotional Events de Custor	ceUomain» # «Serv mer Surveys d <sup>o</sup> Market Data S	witch Administration P Branch Currency Management P	







### 2.8 Functional Pattern – Generic Artifact Mapping



2.9 The Current Account Service Domain, its Asset Type, Functional Pattern and Generic Artifact





2.11 Party Reference Data Directory Entry Control Record





Functional Pattern	Generic Artifact	Behavior Qualifier Type	Example		
DIRECT	Strategy	Goals	Increase market share		
MANAGE	Management Plan	Duties	Relationship development, Troubleshooting		
ADMINISTER	Administrative Plan	Routines	Time-sheet recording		
DESIGN	Specification	Aspects	Business requirements		
DEVELOP	Development	Deliverables	Functional modulespecifiation		
PROCESS	Procedure	Worksteps	Invoice generation		
OPERA TE	Operating Session	Functions	Message capture/routing		
MAINTAIN	Maintenance Arrangement	Tasks	Preventive maintenance task		
FULFILL	Arrangement	Features	Current account standing order		
TRANSACT	Transaction	Tasks/Steps	FX pricing, market trade, clearing & settlement		
ADVISE	Advice	Topics	Tax advice, Corporate finance		
MONITOR	State	Measures	Composite position, Customer alert		
TRACK	Log Record	Events	Customer life event, Servicing event		
CATALOG	Directory Entry	Properties	Product pricing rules, Customer reference details		
ENROLL	Membership	Clauses	Qualification/membershippurpose		
AGREE TERMS	Agreement	Terms & Conditions	Required disclosures,		
ASSESS	Assessment	Tests	Password verification		
ANALYSE	Analysis	Algorithms	Average balance calculation, Propensity to buy		
ALLOCATE	Allocation	Criteria	Staff assignment, Facility allocation		

2.13 Break-down of a Control Record into Behavior Qualifiers and sub-qualifiers

Service Domain	Behavior Qualifier Type	Behavior Qualifiers as defined by BIAN		Sub Qualifiers as defined by users (site specific)
Party Reference Data Directory Properties		Reference: Properties are general customer reference details	$\mathbf{k}$	Reference/Features: Properties relate to customer properties such as SSN, Passport #, Date of Birth
		Associations: Properties detail the customer's links and associations to other parties of interest		Reference/Address: Properties relate to contact details such as home address, email, phone
		Demographics: Properties cover demographic, employment and educational background		Reference/: Properties TBD
		Bank Relations: Properties capture any bank to customer links/relationships		



- + 🗇 Company Officer Role
- + 🗇 Customer Since Date

2.15 Metamodel for Control Record Model Diagram



### 2.16 BIAN Metamodel, Business Object view



### 2.17 BIAN BOM content pattern



### 2.18 Applying the BIAN BOM in payments





## 2.20 Payment Order BOM Diagram



2.21 example of abstraction levels in the BIAN BOM





#### ISO20022 BM



2.23 BIAN Metamodel, Service Operation View




# 2.26 Current Account Semantic API and its Endpoints



#### 2.27 BIAN API Endpoint Format

	Referenced Service	Referenced Control Record	Referenced Behavior Qualifier
PUT	/current-account/isd-reference- ts/ibq-reference-id}/execution	idl/current-account-fulfillment-arrangement/Icr-reference-idl/payme	Pn Invoke an automated execute action against the Payments instance
Trigger a pa	yment for a repeating payment set up	Action Term	
Parameter	S		Try it out
Name		Description	
sd-refere string (path)	ence-id * required	Current Account Servicing Session Reference	
<pre>cr-refere string (path)</pre>	nce-id * required	Current Account Fulfillment Arrangement Instance Reference	
<b>bq-refere</b> string (path)	ence-id * required	Payments Instance Reference	
body * rec	juired	Payments request payload Mes	sage
(body)		Example Value   Model	
		f "currentAccountFulfillmentArrangementInstanceReference": "CAFAIR792716", "paymentsInstanceReference": "PIR748199", "paymentIsinstanceRecord": f "paymentTransaction"; f "paymentTransactionType": "string", "paymentTransactionPaymeReference": "#68847"	

# 2.28 Current Account Service Domain Overview



2.29 BIAN Metamodel, Business Scenarios and Wireframe View



#### 2.30 an example of a BIAN Business Scenario diagram





## 2.32 an example of a BIAN Service Connection. related to its Service Operation





2.34 BIAN Metamodel, Business Capability View



# 2.35 Business Capability Model, top level

**BIAN Business Capability Landscape version 8.0** 



# PART II

Applying BIAN

	Strategy layer	Im	
		oler	
vation	Business layer	nentatio	
Moti	Application Layer	n & Migra	
	Technology Laver	atio	



# 3.1 M5 Banking Group's Group Synergy strategy



# 4.1 BIAN as common Frame of Reference



# 4.2 Using BIAN as Frame of Reference to find and compare candidate solutions



# 4.3 M5 Banking Group's generalization of the Loan Product fulfillment Service Domains



4.4 M5 Banking Group's very own Standing Order SD is split off the Current Account Service Domains



# 4.5 The first components of Mfour Bank's new application platform (late 9070-ties) mapped on the BIAN Service Landscape

Business Direction Management Corporate Relations «ServiceDomain» de ServiceDomain» def	Finance & Risk Management Finance & Risk Man	Group Treasury «ServiceDomain» Corporate Treasury Credd/Margin Manag	o ∰ Credit Risk Regulatory Compliance «ServiceDomain» ∰ Credit ManagementP Regulatory & Legal AuthorityP	Channels	
Investor Relations «ServiceDomain» Corporate Relationship P Corporate Strategy P	Command Comman     Company Bing & Payment & Commany Bing & Commany	els	Counterparty Risk      P		
«ServiceDomain» de Corporate Aliance/Stake Holder de Corganization Direction de P	ServiceDomains     Financial Statements     P	esterviceDomains esterviceDomains Einit & Exposure Mana Sets de eserviceDomains esterviceDomains esterviceDomain	s ∰ germent ∂ s ∰ Fraud Resolution ∂P s ∰ s GerviceDomains ∰ Regulatory Reporting ∂P «ServiceDomains ∰ Regulatory Reporting ∂P		
«ServiceDomain» المنافعة منافعة المنافعة المنافعة منافعة المنافعة منافعة منافعة المنافعة المنافعة منافعة المنافعة منافعة المنافعة منافعة المنافعة المنافعة منافعة منافعة منافعة منافعة منافعة منافعة منافعة منافعة المنافعة المنافعة المنافعة منافعة منفعة منفعة من منافعة منافعة		Bank Portfolio Analysis eP Position Managem «ServiceDomain» # «ServiceDomain Asset Securitzaton eP	ent eP Guideline Compliance eP «ServiceDomains eff		
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5.1 Different disciplines in search of a common language and Frame of Refernce



5.2 The common Frame of Reference provided by BIAN, enables a holistic Enterprise view





#### 5.3 Business Capabilities are served by several Service Domains that can serve several Business Capabilities



5.4 Service Domains are the linking pin between Strategic Business Capabilities and the Architecture that realizes them



# 5.5 Three steps in developing an enterprise blueprint

Step 1 – Filter



Repeat structures to match the lines of business and the reporting hierarchy of the enterprise

# 5.6 Assigning the responsibility for a SD in the Archimate Language





## 5.7 The Bank on a Page for a Line of Business is a view on the common Frame of Reference



# 5.8 Examples of Performance Measures



Different systems and business cost and performance measures can be associated with the Frame of Reference

#### SYSTEMS RELATED COSTS

- Development & deployment
- Training, support & assurance
- technology/platform operations
- Licensing/subscription/purchases

#### NON-SYSTEMS RELATED COSTS

- Workforce utilization
- Workforce training
- Location/equipment/utility/consumables
- Fixed capital allocation
- Fees/licensing/agenc
- Management overhead &support

Costs can be further analysed in terms including:

- Own Vs allocated
- Fixed/variable
- Book value/depreciating costs
- ♦ Repeating/ad hoc
- Volume discounts

#### SYSTEMS PERFORMANCE MEASURES

- Machine utilization
- Operating profile schedule
- Security/resilience
- Performance profile
- User headcount, skill level & schedules
- Variability/configurability
- Advanced technology/practices

#### BUSINESS PERFORMANCE MEASURES

- Staff utilization/productivity
- Operating budgets
- User headcount/skills profile
- Working/commited capital
- Dusiness criticality/contribution
- Reputational/customer exposure/risk profile

5.9 Using the Enterprise Blueprint as common Frame of reference for strategy, performance and change management



# 5.10 M5 Group's strategy: assessments lead to requirements, both attributed to SDs



5.11 Blueprint of M5 Banking Group's Group Services entity, with assigned responsibilities






#### 6.1 The responsibilities of an accounting department and a loan sales process clarified



# 6.2 Business pain-points visualized on the 'bank on a page' of a BIAN member

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# 6.3 Goal contribution per Service Domain vizualized on the 'bank on a page' of a BIAN member

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# Maturity Rating in BIAN according to CMMI

6.4 Maturity Rating per Service Domain on the bank on a page of a BIAN memeber

# Maturity Rating in BIAN according to CMMI



entification Name: Corporate T	ax Advisory MaturityCM					
Comment:						
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Architecture:	krchitecture L5	$\sim$	<mark>2</mark>	$\times$		<b>P</b>
Architecture comment:	Standardized, complete and well managed system architecture to support capability Systems are well integrated, functionally complete, support complete capabilities: Technology is managed through baseline, transition state(s) and target architecture	/ exia	ta.		Â	3
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_hange:	Change L5	Υ.	U	x	3	
Change comment:	Business change manages the capability. Proactive changes management practices result in continuously improved capabilit Change management procedures are industry/market best practice.	68:			Ç	<u>a</u>
Control:	Sontrol L3	$\sim$	Ъ	×	3	1
Control comment:	Business activity is documented and controlled. Same task is performed in same ways with minimal exceptions; Delivery of capability to customer is consistent.				Ŷ	3
Performance:	Seformance L4	$\sim$	6	×	Q.	7
Performance comment:	Performance is consistently measured across the same process. Baseline, transition state(s) and Target sets of metrics defined for capability; A process for measuring and proactively improving performance exists and is adher	ed to	<i>.</i>		<b>^</b>	3
Result:	k Reault L4	$\sim$	<b>1</b> 3	х		2
Result comment:	Results are consistent. • Results are predictable and every action has a defined, known resulting state.					3
Rating CM:	4,2					

# 6.5 Strategic Requirements per Service Domain represented as heat-map on the bank on a page of M5 Banking Group



6.6 Service Domains cooperate in patterns, enabling a secure, controlled delivery of financial services



6.7 Process steps expressed as Service Domains facilitate the selection of business partners



#### 6.8 The requirements for Service Domains and for their interactions are specified



6.9 Business Scenarios are consolidated into a Wireframe, a holistic view on the requirements



7.1 Mapping Service Domains on Application Components reveals th variety of business functionality they support and reveal duplicates



#### 7.2 a Service Domain duplication issue is mitigated by the data integration architecture



7.3The 'bank on a page' of a BIAN member being used to communicate an aspect of the application architecture strategy to management

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#### 7.4 A Conceptual reference architecture pattern can result in standards per application platform



#### The Service Domains Handling External Access (Type 3 Wireframe)



#### 7.6 Vendor Platform evaluation heatmap of a BIAN member

Vendor Solution Available



# 7.7 Mzero Bank's monolithic Loan application is decomposed step by step



#### 7.8 Wireframe for the end-to-end embedding of a Payment solution



7.7 Mapping of the 'ADAPT' candidates and a vendor offer ('BUY') on the Service Domains required for the new Group Payment application



#### 7.10 Requirement coverage comparison of candidate Payment systems for one Service Domain

Key:

Gap

Needs Work Covered

Service Domain Payment Execution - Orchestrate the execution of payment transactions, with, and between bank using any appropriate payment mechanism (A/C, wire, ACH)

Payment Execution Feature Types	Feature Description	Vendor A	Vendor B			
	Automated transaction initiation     Batch/scheduled trasnaction initiation					
	Transaction repair/status update     Network availability/status update	·				
Functional						
Requirements	Hules based payment routing & execution     Correspondent risk/limit checks     Automated/rules based message repair & duplicate payment detection					
	<ul> <li>Payment network access (FedWire Funds, FedWire Securities, CHIPS, ACH) &amp; conversion capabilities</li> <li>Support for file/batch/item gross settlement processing</li> </ul>					
	Full activity reports     Full audit trail reporting     Operator alerts					
	User defined reporting and UI field definition     Posting reports (reconciliation)					
Non	Dual control and operator access profile     Multiple bank/legal entity operation     Suspicious access activity detection					
Functional Requirements	Data encryption     High security					
	High availability/performance					

# 7.11 a Software Product, as a cluster of Service Domains, internally remains 'uncluttered'"

Minimal Viable Product (MVP) wireframe





8.1 Information Realization view; the information landscape, indexed with the BOM's Business Objects linked to the data landscape linked to data technology



8.2 Labeling of data stores with Enterprise Information Architecture Business Objects reveals problems



8.3 Data integration ensures the duplicated Party information remains consistent



## 7.4 High-level information model for the Payment Group Service of the M5 Banking Group





9.1 The Service Domain / Service Operation Frame of reference facilitates the search in M5 Banking Group's Application Service Catalogue



#### 9.2 API coverage heatmap on the BIAN Service Landscape



9.3 Testimonial: delimiting and prioritizing the development of future-proof APIs

AccountInfo is a card account "service" that provides an interface to various applications for Account information. We are moving from a monolithic card account service into smaller more strategic set of micro-services. To ensure the planned micro services are durable with minimal data overlap / duplication, we used "Service Domains" to categorize AccountInfo data fields into various buckets.

This categorization will help us determine the sets of fields that are most valuable to be available in an API in the first set of micro services we are planning to deliver.

DMB Service Domain	Field Count	Note
Position Keeping	47	Balance, Available Credit, over-limit, historical financial standing, etc
Party Data Management	34	Name/Address/Language
Sales Product Agreement	33	TL, Opt, Feature Set, etc
Card Billing & Payment	15	Min pay, cycle code, statement hold codes, payment history, PDD target stuff
Card Authorization	11	Status, Freeze, Activation
Issued Device Administration	10	ANR, Linked Accounts, Exp Date
Customer Credit Rating	9	Bureau stuff, high balance, risk code, etc.

### 9.4 Example of a Wireframe overarching different parties



#### 9.5 Business Scenarios provide business context and information content to the service exchanges



# 9.6 The "extract party data' application service delivers on Control Record level; the 'consult' service allows the service user to choose behavior qualifiers



## 9.7 a Bank's BIAN-based APÏ development and governance toolbox



### 10.1 The phases of the TOGAF ADM


# 10;2 TOGAFs 'zooming' levels imply an iterative approach to elaborating architecture



10-3 The Enterprise Continuum according to TOGAF and the position of the BIAN Reference Architecture for the Financial Industry



#### Architecture Continuum

**Solutions Continuum** 

### 10.4 The Enterprise Repository according to TOGAF



# 10.5 BIAN' contribution to the Enterprise Architecture toolboix





12.2 Stage 2 of a BIAN adoption roadmap: Build a Pilot Case







12.5 Stage 5 of a BIAN adoption roadmap: Evolve your Architecture Practice



# 13.1 A bank consists of three different layers

Business Layer

Grasps the business direction and the business capabilities, including people, business concepts, processes, and business technology.

#### Technology Layer

Encompasses generic services and functions that provides a foundation via which a bank able to run its operations.

#### Application Layer

API Bankingş

This layer represents the Information Systems landscape, with all its applications, data, technical functionality and connections. 13.2 Viewpoints on a bank: Architecture layers and Aspects

Motivation	Strategy layer	lmp
		ler
	Business layer	nentatio
	Application Laver	
		& Migration
	Technology Layer	

13.3 Zooming levels: diviede and conquer a wide scope and a great complexity

