

# DACUM Research Chart for Systems Architect

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Duties		Tasks				
A	<b>Interpret Operations and Product Requirements</b>	A-1 Interview business product managers	A-2 Interview business operations managers	A-3 Cultivate relationships with business management	A-4 Interpret business documents (e.g., actuarial specifications, product definitions, VA strategies, regulatory issues)	
		B-1 Identify the business problems	B-2 Provide interpretation of the business problem	B-3 Analyze the business problem	B-4 Determine impact of the business problem	B-5 Provide temporary solution to the business problem
C	<b>Plan for Modernization of Business Applications</b>	C-1 Identify business drivers	C-2 Identify system drivers	C-3 Build a modernization diagram (e.g., graphical representation)		C-4 Evaluate study of future state
		D-1 Review industry publications	D-2 Attend IT seminars	D-3 Confer with IT vendors	D-4 Review current technology trends	D-5 Collaborate with other companies
D	<b>Perform Technology Research</b>	E-1 Determine A.C. to be maintained (e.g., audit and controls, data architecture, application arch, technology arch)		E-2 Revise A.C. lists (e.g., obsolete, add new)	E-3 Describe current application architecture	E-4 Create principle architecture drivers
		E-12 Maintain architectural components definitions	E-13 Set capacity thresholds for A.C. (e.g., maximum number of processes on a unix server)			
E	<b>Manage Architectural Components</b>	F-1 Prepare training materials	F-2 Conduct training sessions and seminars	F-3 Conduct knowledge acquisition sessions (brainstorming)	F-4 Publish informational documents	F-5 Recommend external training
		G-1 Determine component integration options	G-2 Propose pro-active system design change	G-3 Create high level component design	G-4 Verify high level component design	
F	<b>Facilitate Knowledge Transfer</b>	H-1 Identify the IT problem	H-2 Provide interpretation of IT problem	H-3 Analyze the IT problem	H-4 Determine impact of IT problem	H-5 Provide temporary solution to IT problem
G	<b>Provide Component Integration</b>					
H	<b>Assist IT Associates in Solving Problems</b>					

A-5 Evaluate internal business trends	A-6 Document business propositions					
B-6 Provide alternative solutions to the business problem	B-7 Provide estimates on characteristics of alternatives					
C-5 Revise the modernization plan	C-6 Explain the modernization plan	C-7 Formulate migration strategy (e.g., windows, NT to XL migration, or project dependencies)		C-8 Audit modernization process	C-9 Generate recommendations (for funding)	
D-6 Recommend components for "arb" approval						
E-5 Define relationship between A.C.	E-6 Develop architecture decision criteria (e.g., playbooks)	E-7 Interpret enterprise architecture guidelines	E-8 Set A.C. useable guidelines	E-9 Audit conformance for architectural guidelines	E-10 Audit for enterprise architectural conformance	E-11 Maintain glossary of architectural terms
F-6 Provide mentoring and coaching (e.g., one on one)	F-7 Provide informal feedback to management					
H-6 Provide direction for a solution to IT problem	H-7 Evaluate IT problem characteristics					

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## General Knowledge and Skills

Computer languages  
Programming skills  
Project management skills  
Architectural models  
Data modeling  
Function modeling  
Deductive and inductive reasoning  
Design methodologies  
Listening skills  
Comprehension  
Context interpretation skills  
Unified modeling language  
General contract laws  
Business risk mitigation

Problem solving skills  
Communication skills  
Quality assurance  
Develop analogies  
Arbitration skills  
Writing skills  
Classification schemes  
Understanding of current business processes  
Simulation skills  
Process engineer  
Serve as a source of business knowledge  
Six sigma

## Worker Behaviors

Willing learner  
Adaptable  
Leader  
Abstract thinker  
Comfortable with ambiguity  
Work independently  
Patient  
Dedicated  
Credible  
Accountable  
Team player

Ethical  
Visionary  
Disciplined  
Methodical  
Trainable  
Sticks to principles  
Has integrity  
Lifelong learner  
Collaborator

## Tools, Equipment, Supplies and Materials

Drawing tools (software)  
Word processor  
Analysis impact tools (software)  
Work productivity tools MS Office  
Third party individual think tanks

Computer – laptop  
Plotter  
White board  
Office space, furniture  
Office supplies  
Print services  
Internet access  
De-bugging tools calculator  
Program languages

## Acronyms

ARB	Architecture Review Board	MBO	Management Business Objectives
ACORD		NAVA	National Association for Variable Annuities
CCB	Configuration Control Board	NF	Nationwide Financial
CMM	Capability Maturity Model	NFCTO	Nationwide Financial Chief Technology Officer
CTO	Chief Technology Officer	PAFR	Projects/Activity Funding Request
DBA	Database Administrator	PD	Problem Determination
DRP	Disaster Recovery Plan	SLA	Service Level Agreement
EAI	Enterprise Applications Integration	VP Tech Ser.	Vice President of Technical Services
ITIL	Information Technology Infrastructure Library	UML	Unified Modeling Languages
JAD	Joint Application Design	ITT	Information Technology

## Future Trends and Concerns

Cultural changes  
Telecommuting  
Knowledge retention (resources)  
Organizational structures  
Changes in business strategies  
Not enough investment in training  
Shrinking budgets  
Rapid market fluctuations  
Demographic changes  
Lack of skilled developers  
Information overload  
Rate of technology trends  
Increasing customer expectations  
Shrinking labor markets  
Globalization and offshore development  
Evolution of storage medium  
Cannot keep up with rate of technological increase  
Web services  
Voice recognition  
Individual solutions  
Security and privacy  
Computer hacking  
Smart services  
Legacy issues  
Dealing with obsolete technology  
System integration  
Enterprise application integration