

A G E N D A

AD HOC TECHNOLOGY COMMITTEE

REGULAR MEETING

MONDAY, NOVEMBER 6, 2017, AT 9:00 AM
BOARD ROOM – GATEWAY COMPLEX

1. MEETING CALLED TO ORDER: Donald J. Liddle, Chairman
2. ROLL CALL: Liddle, England, Solloway, Kern, Lanier, Slee, Weihrich, and Kelso, ex-officio member
3. APPROVAL OF REPORT: Regular Meeting of September 18, 2017 (Attachment)
Regular Meeting of October 2, 2017 (Attachment)
Regular Meeting of October 16, 2017 (Attachment)
4. RESIDENTS' FORUM
5. UNFINISHED BUSINESS
 - a. Strategic Planning Process Presentation (Attachment)
6. NEW BUSINESS
 - a. Future Planning
7. RESIDENTS' FORUM
8. NEXT MEETING: The next regular meeting will be held on Monday, November 20, 2017, at 9:00 a.m. in the Board Room at Gateway Complex.
9. ADJOURNMENT

DJL/dr

cc: GRF Board

REGULAR MEETING
MONDAY, SEPTEMBER 18, 2017, AT 9:00 A.M.

A regular meeting of the Ad Hoc Technology Committee was convened by the Chair, Donald J. Liddle, at 9:00 a.m. on Monday, September 18, 2017, in the Board Room at Gateway Complex.

Present, in addition to the Chair, were Mary A. England, Vice Chair, Wayne B. Lanier, Attendance Heinz Weihrich, and Robert D. Kelso, ex-officio member and GRF Board representative. Frederick J. Kern and Christopher J. Slee joined the meeting in progress. Sheldon Solloway was excused. Also attending were Geraldine Pyle, President, and Carl W. Brown and Mary Lou Delpech, Directors, GRF; Timothy O'Keefe, CEO; Richard S. Chakoff, CFO; Joseph Bruzdinski, Information Technology Manager; and several residents.

Mr. Liddle introduced Mr. O'Keefe, who made a presentation to the Committee on CEO's information technology at the Golden Rain Foundation, including an overview of Presenta- existing and planned projects, as well as technologies that are being explored for the tion future. Discussion followed. (Attachment)

After a brief discussion, the Committee agreed to continue full Committee meetings Meeting twice a month in the same location and at the same time until subcommittees are Logistics formed. At that time, the Committee will consider meeting monthly.

Mr. Liddle opened discussion on ideas on ways to proceed with Committee work. Ideas on During discussion, he asked the Committee to develop a list of possible areas for the Ways to Committee to focus for the next meeting. Proceed

Dr. Lanier announced that there will be a tour of Mutual 48's solar and EV Mutual 48 (Electronvolt) set up on October 5, 2017, in conjunction with Informed Rossmoor Tour Voices.

During the Residents' Forum, Mr. Brown asked if Anthony W. Grafals, General Residents' Counsel, will review use of chat boards for Committee communication. He also Forum requested that the Siemen's SiPass Access Control System use a universal reader. Dale J. Harrington commented that digitizing blue prints is a good thing and that he supports Docu-sign.

Committee member Mary England prepared supplemental minutes. (Attachment) Minutes

There being no further business to come before the Committee, the meeting was Adjourn- adjourned at 10:33 a.m. ment

The next regular meeting of the Ad Hoc Technology Committee will be held on Next Mtg: Monday, October 2, 2017, at 9:00 a.m. in the Board Room at Gateway Complex. 10/2/17

Donald J. Liddle, Chair
Ad Hoc Technology Planning Committee

GRF IT Overview

Current Systems

Server Based Software Applications

- Jenark (Accounting, Work Order, Member Records)
- ActiveNet (Recreation)
- AmanoNet (Gate Access)
- ClubSoft (Golf reservations, point-of-sale and inventory management)
- SiPass (Access Control) *upcoming*

Desktops:

- 3+ year hardware replacement plan (~30 devices/yr)
 - HP All-In-One
- In process:
 - Upgrade to windows 10 on all computers
 - Upgrade to Office 365 on all computers
 - Upgrade of Antivirus / Malware to better protect the foundation

Backup:

- 2 Nimble storage devices for multiple virtual servers (MOD and Gateway)
 - In process of adding cloud based mirror server
- Additional needs:
 - Backup power for MOD and Gateway
 - Dedicated A/C unit for Gateway server room
 - Backup phone equipment at Gateway
- Disaster Recovery Plan:
 - In process

Other

- Satellite-based water management systems for MOD and golf courses
- DocuSign implementation for mutuals

Enhancements

In process:

- Redesign of the front gate video camera system from the front gate to MOD recorder
- Deployment of phone system enhancements
 - Online Chat for the Order desk
 - Email support request for Order desk
- Del Valle Clubhouse Remodel
 - New Computer installations
 - Setup wireless access and installation of unknown tablet type and quantity
 - Installation of new Phone paging system for staff and residents
 - Installation of new phones
 - Integration of new cameras into the current camera system

Initiatives in various stages of development:

- Access control and universal membership card implementation at fitness center
- Mobile Device Management "MDM" for all field devices and smartphones
- Document scanning project
- Online room reservation system
- MOD Conference Rooms
- Video conference equipment installation
- New fleet maintenance tracking software and server installation

Exploring:

- Water reclamation
- App-based on demand shuttle service
- Autonomous shuttle bus system
- Organic recycling

- Online Work order system with personal field devices would allow access to remote work order processing
- Replacing GRF Fiber Optic cable
 - MOD to Gateway
 - Gateway to Creekside
 - Gateway to DV
 - Gateway to Gard Gate
 - Creekside to Event Center

GRF AD HOC TECHNOLOGY COMMITTEE MEETING MINUTES 9 18 2017

AGENDA

5. NEW BUSINESS

5a. CEO presentation. Presentation by Tim O'Keefe on GRF IT covering overview of existing, planned, extending, and exploring technologies for GRF IT. Presentation Outline to be provided to Committee members. Attending in addition to the CEO were the CFO, and IT Manager. Following the presentation, Committee members and residents asked questions.

5a. Q & A:

1. Recovering recycle waste as revenue – have you considered it?
2. Disaster Recovery – does it include Gate? A: Have designed program Disaster Recovery plan. GRF Business Continuity Plan for GRF is now in works. Phones, IT, cabling Securitas response. Mention and reference to the GRF All-Hazards Emergency Plan was made.
3. GRF EP Plan is online, GRF separate and distinct responsibility (for GRF amenities and assets)
4. Is there a possibility for a WC City joint program on water reclamation project? Not yet ...CEO will raise this with the new City Manager.
5. Fiber Optic conduit, is there room in conduit for expanding Fiber Optic capacity in conduit?
A: contractor would need to propose upgrade. Has GRF looked at Google wireless? Not yet. Has GRF IT developed a Requirements and specifications document? A: Not yet. What is the "useful life" of the current Fiber Optic Network? A: About five years.
6. What is status of GRF Solar Farm? 2 locations, 1 Megawatt system, has "Power Purchase Agreement, Third party owns system. 20-30 % savings, \$6M savings over 20 yrs projections. The City of Walnut Creek & Contra Costa Fire District (CCFD) are asking for modifications, projection is for 2018 spring installation, forecast Solar will be online 7/1/2018. Solar Farm is designed to provide to 60-65% energy requirements for GRF, with LED, etc. implementations, do not project to sell back energy.

5 b. Meeting Logistics: After discussion the Committee agreed to continue full Committee meetings twice a month, same location, times until sub-committees form. Then consider monthly full Committee meetings.

GRF AD HOC TECHNOLOGY COMMITTEE MEETING MINUTES 9 18 2017

AGENDA (continued)

5. NEW BUSINESS

5.c. Ideas on Ways to proceed with Committee work:

Bob suggests members develop a list of what we want to consider what is included as GRF IT?
Example: Is recycling IT?

Chris Slee suggests 8-9 areas? Mary England passed around a copy of technology ideas from March 8, 2017 GRF Technology Interest Meeting (which Chris Slee put together).

What if GRF is doing an IT area, CEO suggests stay focused on bigger picture stuff.

Don Liddle asks committee to develop IT list for next meeting.

Kelso recommends Committee nail down the things that are clearly GRF purview and areas interesting to members. EX: Cell phone coverage, is of interest, does Committee look at Cell services for members?

Don Liddle: Focus on GRF scope that GRF provides for – and also included those grey areas

Fred Kern to Tim O’Keefe? What do you think the Committee needs to handle? CEO suggests that the Committee Charter is to develop a 5 year plan so focus on the big picture areas.

Chris Slee: Look at customers of GRF, ex: Comcast Cable. Drawing lines such as not going over what GRF is already doing and planning is not helpful.

BK: GRF Board Committees need to explore where, how to communicate, such as CHAT Board.

Question raised by Carl Brown on how Committee communicates. Do you want the “Chat Board”? To communicate? Mary England mentioned the prior Technology Interest Group was very time-consuming, BK: GRF Board and Committees need to explore where, how to communicate, such as CHAT Board.

Don Liddle: 2-3 can email together, just cannot have a QUORUM of Committee members which constitutes a meeting, must notify members in advance for a meeting.

Tim O’Keefe: GRF is subject to the open meeting requirements, can look at rules.

ANNOUNCEMENTS:

10/5/2017 tour of Mutual 48 Solar & EV through Informed Rossmoor Voices

GRF AD HOC TECHNOLOGY COMMITTEE MEETING MINUTES 9 18 2017

AGENDA (continued)

6. RESIDENTS FORUM:

Carl Brown asks if Tony Grafals will review use of CHAT Board for Committee communication. Also requests of Seimens' SiPass Access Control System can be using a universal reader. If putting in Optical Fiber, will GRF likely consider migrating to Internet, via dark fiber?

Leo Harrington, Terra Granada, good for Blue Prints to be digitized, Docu-sign is great.

7. ADJOURNMENT at 10:33 AM8. NEXT MEETING: 10/2/2017 9 AM

Meeting Minutes Submitted by: Mary A. England

AD HOC TECHNOLOGY COMMITTEE REPORT

REGULAR MEETING
MONDAY, OCTOBER 2, 2017, AT 9:00 A.M.

A regular meeting of the Ad Hoc Technology Committee was convened by the Chair, Donald J. Liddle, at 9:02 a.m. on Monday, October 2, 2017, in the Board Room at Gateway Complex.

Present, in addition to the Chair, were Mary A. England, Vice Chair, Wayne B. Lanier, Attendance Heinz Weihrich, Frederick J. Kern, Christopher J. Slee and Robert D. Kelso, ex-officio member and GRF Board representative. Frederick J. Kern, Christopher J. and Sheldon Solloway were excused. Also attending were Geraldine Pyle, President, and Melvin C. Fredlund and Mary Lou Delpech, Directors, GRF; Timothy O'Keefe, CEO; and several residents.

Mary Neff recommended the following criteria for Committee IT Project consideration, Residents' evaluation, and selection: Forum

1. GRF Operations Cost Savings
2. GRF Operations Improved Efficiency
3. GRF Operations Reduced Costs
4. Return on Investment (ROI)

Committee discussion included scope of Committee proceedings, which will focus on Scope of GRF Operational IT Project Areas. Question of whether projects which primarily Meetings benefit GRF Members, such as Comcast are to be addressed. Agreement on the evaluation of Comcast opportunities and competitors is appropriate.

A procedural document for evaluating project ideas will be drafted by Wayne B. Lanier. Documents for Consideration

Various documents for the Committee's consideration were submitted by Christopher J. Slee, Heinz Weihrich, Bob Kelso, and Mary England. (Attachments)

Supplemental minutes were prepared by Mary England. (Attachment) Minutes

There being no further business to come before the Committee, the meeting was Adjournment adjourned at 10:59 a.m.

The next regular meeting of the Ad Hoc Technology Committee will be held on Next Mtg: Monday, October 16, 2017, at 9:00 a.m. in the Board Room at Gateway Complex. 10/16/17

Donald J. Liddle, Chair
Ad Hoc Technology Planning Committee

DJL/dr

MONDAY, OCTOBER 2, 2017

On the Minutes ..

Minutes should

- Support Open Meetings
 - i.e. allow those not physically present to have some understanding of the meeting
- Include all supporting presentation materials etc.
 - I.e. in this case Tim O'Keefe's presentations etc.
 - E.g. submissions like those Mary England has handed out in the past if considered or reviewed at all by the board
- Record significant points of Q&A, decisions
- Not be a list of "activities"
 - E.g. not we met, we talked about x, we left

On "Ways to Proceed" ... "Technologies to Consider"

Rather than just throw things out, starting from the March 8 meeting:

March 8	Idea Generation Mtg	Slee Suggestions
137 Total Ideas _Broad 7 Communications 6 eArchitecture 2 ePayment 3 Health 2 Home 8 Idea Generation 5 Infra 7 Infra-Power 13 Infra-Tech 1	Manage 7 News 4 Safety 10 Security 3 Training 13 Transport 7 Web 27 WebEvents 8 WebNews 1 zOther 3	Physical Technologies <ul style="list-style-type: none"> • Transportation • Energy • Solar • Security • Communications [non-IT] Virtual [IT] <ul style="list-style-type: none"> • Back office and Enterprise Management • Front Office • Out of Office • IT Infrastructure

Technologies can

- Address current issues
- Support future opportunities
- Create future opportunities

i.e. just picking "technologies to consider" misses the point, and risks

- being a set of "solutions" looking for a real problem or opportunity
- Missing the real "customer" demands
 - E.g. I've heard considerable discussion about renters vs members and whether GRF has an unquantified revenue shortfall
- Becoming a set of pet projects

Systematic Approach

We need a systematic approach to identifying needs and opportunities. Classically:

Mission: some excerpts from the GRF Mission Statement:

- "Develop a community or communities for senior citizens"
- "Provide **services** and community **facilities** to the occupants of the community or communities"

Customers: who do we serve? What are the various communities? Relative Volumes, Priorities etc.?

- Primary
 - Members
 - Clubs
 - ... etc.
- Secondary
 - Mutuels
 - ... etc.

Products and Services: what do we provide for these segments?

- Directly?
- Indirectly? e.g. thru the Mutuels, MOD, etc.
- Orchestrated? E.g. through Comcast, ATT

Channels: How do we reach out to them? Paper? In person? Electronically? Push? Pull?

- e.g. last 15 years has been about **self service** channels, GRF has few

Capabilities: What capabilities [processes] do we need to deliver those products and services?

- Business ... People, Processes, Facilities
- Technical ... Applications, Data, Technology

i.e. we need a MODEL of GRF and it's eco-system to systematically find needs and opportunities

- We need **to explore these areas for opportunities more than pick technologies**

Guiding Principles ... should guide our approach ...

e.g.

Favor newer and prospective customers

- They bring expectations essential to ongoing progress
- Long term customers are too often
 - frustrated with silent, resigned acceptance
 - satisfied with lower expectations and resistant to change
- Relevance and Survival rely on change

Deliver the products and services customers expect and /or will appreciate

- Not just the ones we [currently] [choose to] provide
- Ease of End user experience is key
- Support learning and adaption through experience (e.g. "Agile")

Reengineer Capabilities to better deliver better products while reducing costs

- Not just automate for “better sameness”
- E.g. “self service” channels should displace “in person” over time
- E.g. Kindle books displace physical books

Develop a considered As-is, Can be, Should be integrated approach

- i.e. “Should be” is directional, but not part of a plan
- Not just provide a list to be cherry picked

Position as early majority, main street on the Technology adoption curve

- Benchmark wherever possible
- Only early adopter with a compelling case, opportunity
- Laggard generates frustration

Make an informed trade-off between desires and needs

- Some needs may not appear attractive but are pre-requisites to desires
- ROI is appealing, but very difficult for new products and infrastructure

Address Life-Cycle issues, not just initial technology adoption

- Products and services require governance mechanisms, service organizations, backup, recovery, continuity etc.

Plan: we need to agree what constitutes a “Plan”

From Mirriam Webster:

- 1: **drawing or diagram** drawn on a plane: such as
 - a :a top or horizontal view of an object
 - b :a large-scale map of a small area
- 2
 - a : method for achieving an end
 - b :an often customary method of doing something : procedure
 - c :a detailed formulation of a **program of action**
 - d :goal, aim
- 3:an **orderly arrangement of parts** of an overall design or objective
- 4:a **detailed program** (as for payment or the provision of some service)

Written account of intended future course of action (scheme) aimed at achieving specific goal(s) or objective(s) within a specific timeframe. It explains in detail what needs to be done, when, how, and by whom, and often includes best case, expected case, and worst case scenarios. See also planning.

Read more: <http://www.businessdictionary.com/definition/plan.html>

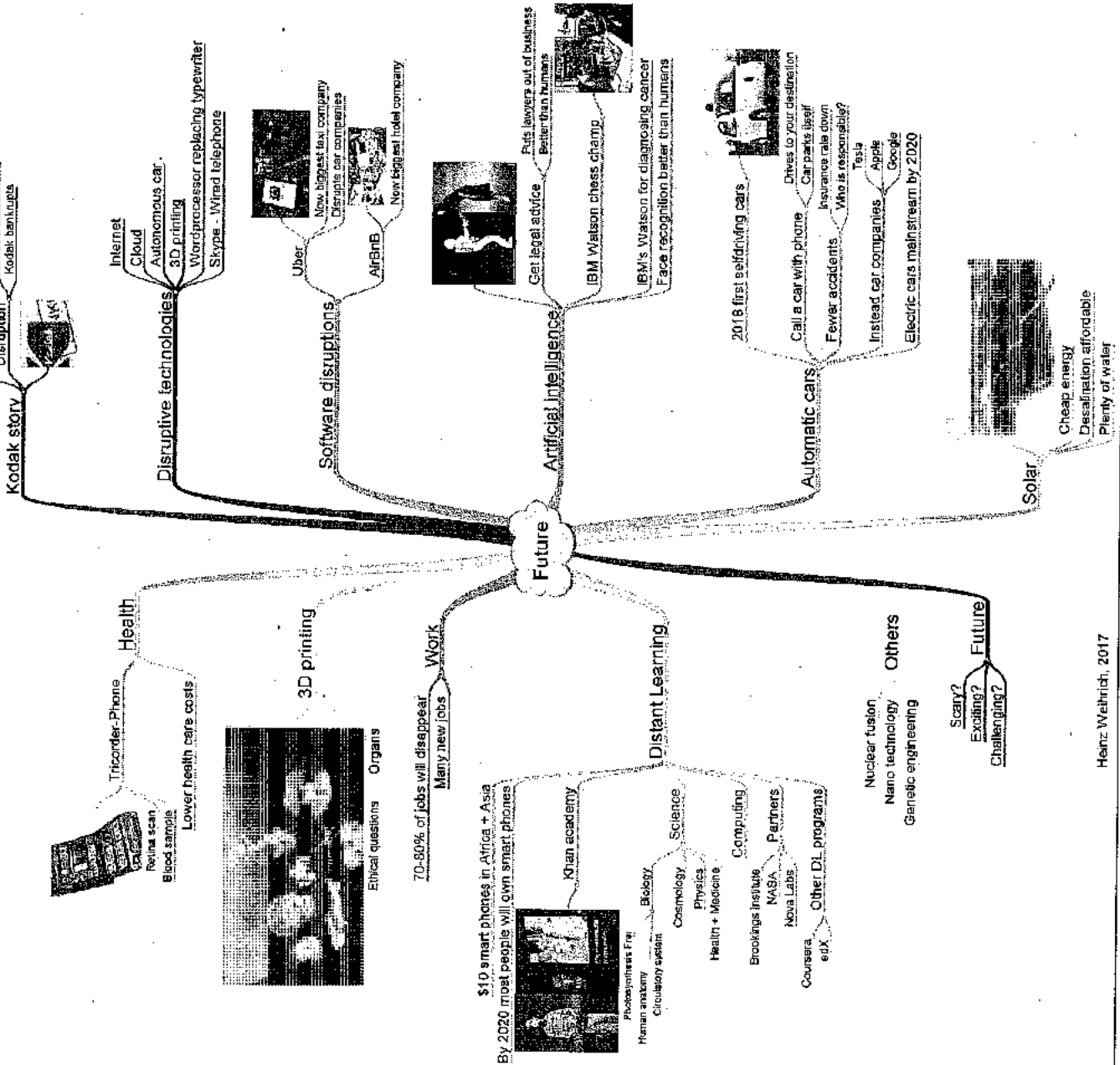
Lastly, different technologies have different **Clockspeed's** – the rate of change – so:

- A 5 year time horizon may be required for things like electric vehicles
- Past 2 years is close to star gazing for many IT applications and/or user adoption Patterns

i.e. we need clear expectations on what need to be answered to deliver a product from this Board

Disruptive Innovations - Pathway to the Future

A disruptive innovation is an innovation that creates a new market and value network, and eventually disrupts an existing market and value network, displacing established market leaders and alliances



Heinz Wehrich, 2017

GRF Operations:

- Data mining
- Sync data bases
- GRF fiber
- Backup improvements
- Online account and interaction- pay bills, online class registration, buy tickets
- Mobile MOD equipment
- GRF Youtube channel- fitness center training, Rossmoor orientations, board meetings, club meetings, lectures, performances?
- Clubs website
- Updated GRF website
- Online gate access lists

Residents:

- cell phone coverage
- electric car charging and standards
- Comcast contract
- data survey- most pressing tech issues, cell phone ownership
-



Mary A. England <maryaengland4@gmail.com>

Links for Resources for GRF AD HOC Technology committee

1 message

Mary A. England <maryaengland4@gmail.com>

To: weihrichh@usfca.edu

Wed, Sep 20, 2017 at 1:23 PM

I have put together the following links for the GRF AD HOC Technology committee to review. I think this will help put the next meeting in context and inform the committee of relevant background.

GRF AD HOC Technology Committee Background Resources for Reference:

<http://rossmoor.com/wp-content/uploads/2013/11/17Mission-Technology5-25.pdf>

<http://rossmoor.com/resident-information/rossmoor-governance/golden-rain-foundation/general-plan/>

http://rossmoor.com/wp-content/uploads/2013/12/Chapter13_Technology.pdf

<http://rossmoor.com/wp-content/uploads/2015/08/Survey-2015-Rossmoor-Broadband-8-27.pdf>

<https://groups.yahoo.com/neo/groups/rossmoortech/conversations/messages/321>

Mary A. England

AGENDA:

3. 09/18/2017 Meeting Minutes approval deferred pending inclusion of submitted detail and handouts. GRF Counsel to present rationale for "brief" GRF minutes. Committee name and title does not include "Planning".

4. RESIDENTS' FORUM

Mary Neff recommended the following criteria for Committee IT Project consideration, evaluation, and selection:

1. GRF Operations Cost-savings
2. GRF Operations Improved Efficiency
3. GRF Operations Reduced Costs
4. Return on Investment (ROI)

Committee Chair agreed, reinforced that IT Project Areas are to benefit GRF to better run operations, benefits residents as well.

5. NEW BUSINESS

SCOPE: Committee discussion included scope of Committee proceedings which will focus on GRF Operational IT Project Areas. Question of whether projects which primarily benefit GRF Members such as Comcast are to be addressed. Agreement on the evaluation of Comcast opportunities and competitors is appropriate.

PROCEDURE: A procedural document for evaluating project areas will be drafted by W. Lanier.

PROJECT AREAS: Discussion of potential GRF IT Project Areas focused on:

1. IT Integration
2. Infrastructure
3. Transportation
4. Communication
5. Water Resources Reclamation

Summary of the discussion of above GRF Operations Project Areas includes:

1. **IT Integration:** Database integration (4), Mobile (GPS) & Interactive Workorder System Integrated with Jenark (or enterprise Database), Single Sign-on Portal for GRF Member access to GRF Functions such as Member Services, Financial transactions (AP), Resident Services, Fitness Center
2. **Infrastructure:** Fiber (Cable) Network for GRF and Member use, Solar project and Energy Audit (GRF Facility interior lighting, street lighting, HVAC, etc.) Request made for presentation by GRF Solar Consultant, including biography, Tim O'Keefe will follow-up.
3. **Transportation:** EV Charging opportunities/costs, GRF Fleet of Vehicles/Bus/Truck EV opportunities, GRF Transit Study 2017, grants?
4. **Communication:** Emergency Alert System (independent of devices), GRF Video "YouTube" (for training, meetings, reference), Website re-design for business and member access (Single sign-on portal), Interactive workorder system linked to billing, notifications, mobile network (cellular) reliability
5. **Water Resources Reclamation:** Explore independent Water sources for golf courses, landscape, supplier to Mutuals?

6. RESIDENT FORUM

Follow-up Question on how to distribute Committee work products. Email distribution of documents can be done among Committee members.

Attachments:

1. Bob Kelso list of project ideas
2. Chris Slee Documentation
3. Mary A. England draft of 9/18/2017 Minutes, Committee resources list
4. Heinz Weihrich diagram of Tech & Innovation Distruptors

Draft submitted by Mary A. England 10/03/2017 V.2

AD HOC TECHNOLOGY COMMITTEE REPORT

REGULAR MEETING
MONDAY, OCTOBER 16, 2017, AT 9:00 A.M.

A regular meeting of the Ad Hoc Technology Committee was convened by the Chair, Donald J. Liddle, at 9:00 a.m. on Monday, October 16, 2017, in the Board Room at Gateway Complex.

Present, in addition to the Chair, were Mary A. England, Vice Chair, Sheldon Solloway, Attendance Secretary, Frederick J. Kern, Christopher J. Slee, Heinz Weihrich, and Robert D. Kelso, ex-officio member and GRF Board representative. Wayne B. Lanier was excused. Also attending were Geraldine Pyle, President, and Melvin C. Fredlund, Directors, GRF; and Anthony W. Grafals, General Counsel.

Mr. Grafals addressed the Committee on the subject of the legal implications of the GRF Legal content of meeting minutes and the GRF policy on open Committee meetings. Counsel

A motion was made by Mr. Liddle, seconded by Ms. England, and CARRIED with two members abstaining, to include as part of the Committee's reports, as attachments, documents submitted during a meeting and members to provide any documents designed for consideration at the next meeting be submitted 10 days prior to that meeting so they could be included as attachments to the agenda. Motion
re. Meeting
Reporting
Procedures

Committee members England, Kern, and Slee each presented their approaches to Meeting achieving the Committee's mission. The Chair appointed those three members to Methods prepare a suggested method of proceeding for presentation at the next meeting.

After a brief discussion, the Committee agreed to continue full Committee meetings Meeting twice a month in the same location and at the same time until subcommittees are Schedule formed. At that time, the Committee will consider meeting monthly.

Members Mary A. England, Christopher J. Slee, Fredrick J. Kern and Heinz Weihrich, Idea Sub- presented various ideas on ways to move forward. (Attachments). mission

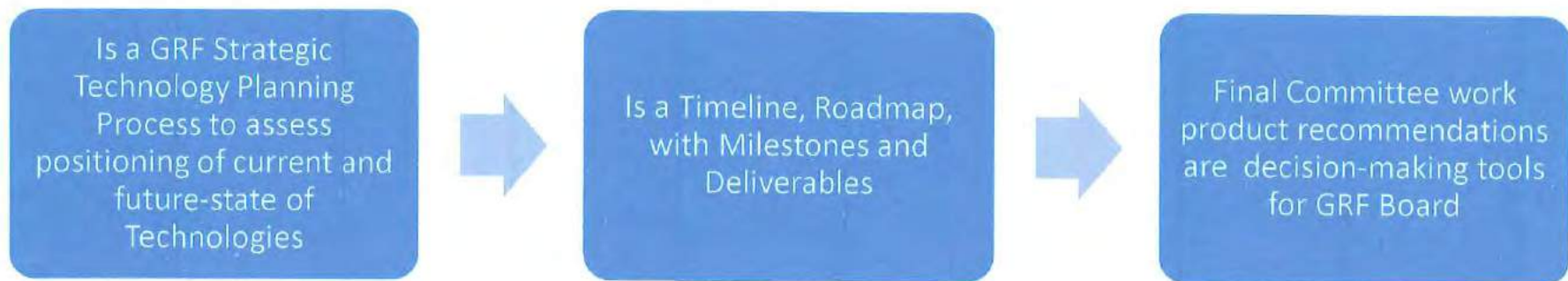
There being no further business to come before the Committee, the meeting was Adjourn- adjourned at 11:05 a.m. ment

The next regular meeting of the Ad Hoc Technology Committee will be held on Next Mtg: Monday, November 6, 2017, at 9:00 a.m. in the Board Room at Gateway Complex. 11/6/17

Donald J. Liddle, Chair
Ad Hoc Technology Planning Committee

DJL/dr


GRF Ad Hoc Technology Committee: Strategic Technology Plan Draft Process Roadmap



GRF Ad Hoc Technology Committee: Strategic Technology Plan Milestones Draft Process Roadmap

- 
- GRF Technology Plan that anticipates GRF's technology needs for next 5 years:

- 
- Is NOT an IT/Technology, Software Development Project

- 
- Plan: integrated, systematic approach for ID, prioritizing, implementing, maintaining existing/new services, effective and cost-efficient GRF operations

- 
- Needs to be Team-based, consensus-based, collaborative process

- 
- Deliverables, reports, options, recommendations best if delivered early

GRF Ad Hoc Technology Committee: Strategic Technology Plan Milestones Draft Process Roadmap

OCTOBER 2017	NOVEMBER 2017	DECEMBER 2017	JANUARY 2018	FEBRUARY 2018	MARCH 2018	APRIL 2018	MAY 2018
<ul style="list-style-type: none"> • IT Presentation • Scope: • GRF OPNS • Roadmap • Recommend Project Areas • Clarify Project Status • Draft Project "Definition" Document Template 	<ul style="list-style-type: none"> • Confirm Milestones • Confirm Major Project Areas • ID Project Priority Criteria • ID Major Project Area Sub-Committees • Assign Sub-Committee Leads, Members • Publicize Sub-Committee Project Areas 	<ul style="list-style-type: none"> • Each Sub-Committee Draft Major Projects onto "Definition" Document Template • Schedule Sub-Committee Recruiting • ID Urgent Technology Priority Projects for GRF Capital Budget inclusion 	<ul style="list-style-type: none"> • Recruit/Interview Sub-Committee members • Sub-Committees Meet • Sub-Committees Report to Committee • Sub-Committees each Revise based on Committee input 	<ul style="list-style-type: none"> • Sub-Committees present "Definition" Documents to Committee for input • Sub-Committees Revise "Definition" Documents based on input • Sub-Committees do initial Strategic Analysis of Projects (Strengths, Weaknesses, Opportunities, Competition-SWOC) • Sub-Committees present SWOC to Committee 	<ul style="list-style-type: none"> • Committee evaluates Priorities of Project Areas based on "Business Value" • Research Best Practices for Priority Projects 	<ul style="list-style-type: none"> • Assess Project "Best Practices" for Cost: Benefit Analysis • Re-assess Projects Priority based on Cost: Benefit Analysis • Consensus on Preliminary Priority Project recommendations for near-term funding 	<ul style="list-style-type: none"> • Re-Prioritize Projects for draft initial recommendations based on identified GRF OPNS "Business Value" • Evaluate lost opportunity if Priority Projects not funded • Estimate 2018 Operations Budget impact for Priority Projects (near-term) based on broad estimate of costs (savings, increases)

10/14/2017

Mary A. England

3



Ad-Hoc Technology Committee

Cannot

Something that has no

And no agreed

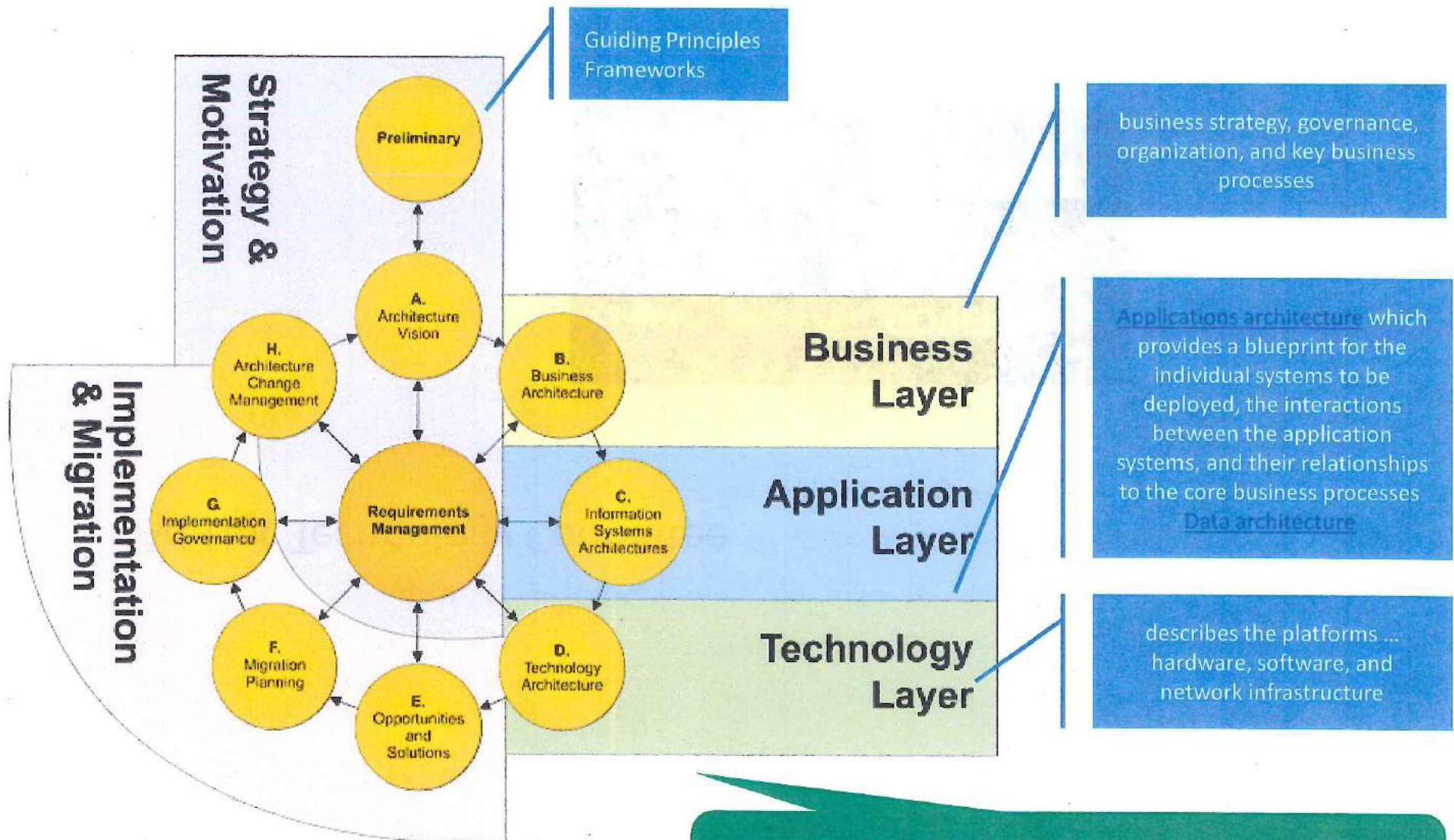
GOVERN

PROCESS

OUTPUTS



Enterprise Architecture Elements ... Framework ... What and Why?



Tend to jump between Layers and have no logical filing system

3-22



Framework ... What and Why?

On what constitutes a “Plan”

From Mirriam Webster:

1: drawing or diagram drawn on a plane: such as

a : a top or horizontal view of an object

b : a large-scale map of a small area

2

a : method for achieving an end

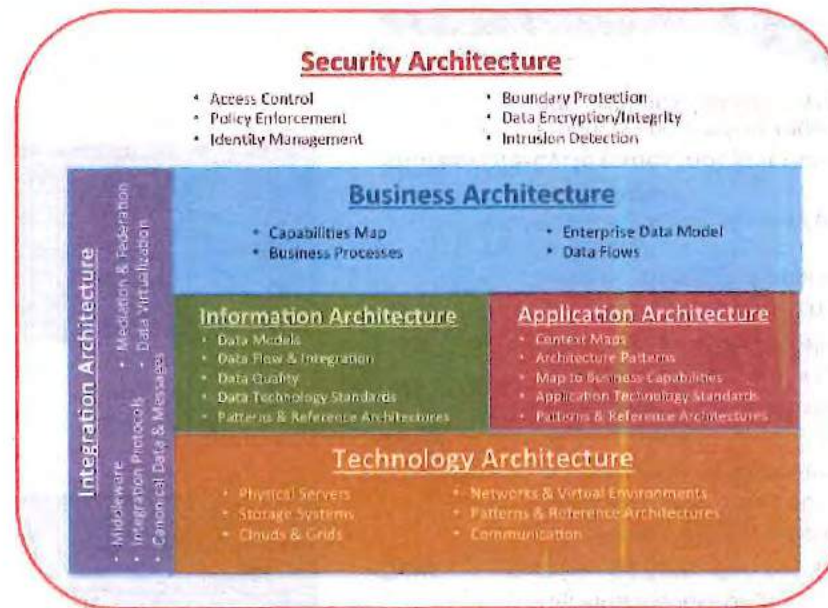
b : an often customary method of doing something : **procedure**

c : a detailed formulation of a **program of action**

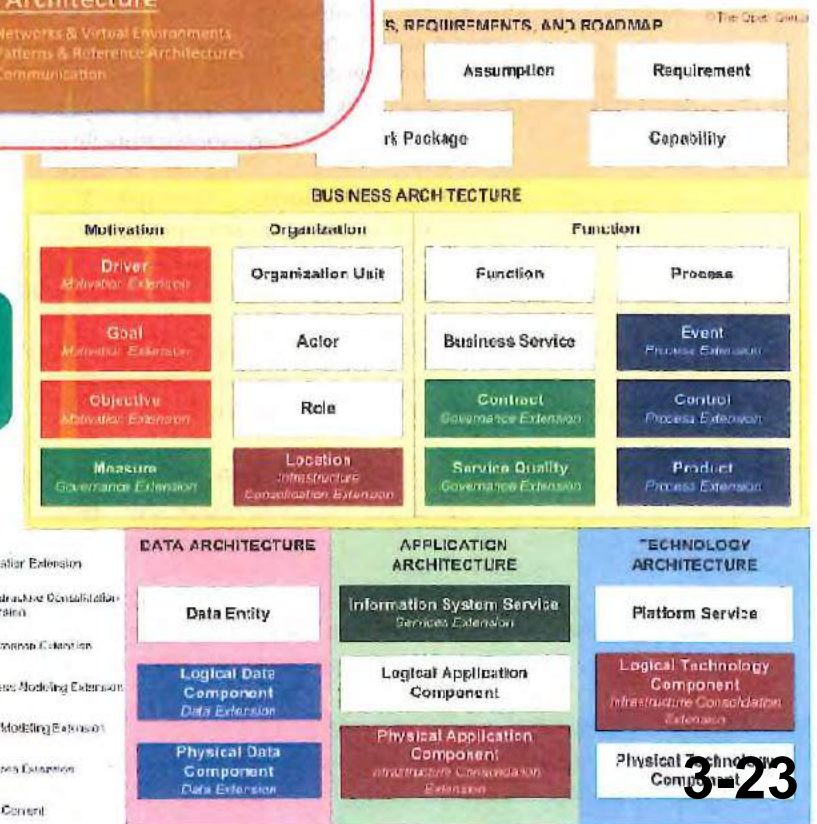
d : goal, aim

3: an orderly arrangement of parts of an overall design or objective

4: a detailed program (as for payment or the provision of some service)



We need to know what the parts look like





Guiding Principles ... What and Why?

Conway's law is an adage named after computer programmer Melvin Conway, who introduced the idea in 1967;^[1] it was first dubbed Conway's law by participants at the 1968 *National Symposium on Modular Programming*.^[2] It states that

"organizations which design systems ... are constrained to produce designs which are copies of the communication structures of these organizations

— *M. Conway*^[3]

The law is based on the reasoning that in order for a software module to function, multiple authors must communicate frequently with each other. Therefore, the software interface structure of a system will reflect the social boundaries of the organization(s) that produced it, across which communication is more difficult. Conway's law was intended as a valid sociological observation, although sometimes it's taken in a humorous context.

Steam Engines
replaced Water
Wheels ...
i.e. AUTOMATED

Small Electric
motors changed
work
i.e. REENGINEERED

Internet rewired
Communications
i.e. REINVENTED

Favor newer and prospective customers

- They bring expectations essential to ongoing progress
- Long term customers are too often
 - frustrated with silent, resigned acceptance
 - satisfied with lower expectations and resistant to change
- Relevance and Survival rely on change

Deliver the products and services customers expect and /or will appreciate

- Not just the ones we [currently] [choose to] provide
- Ease of End user experience is key
- Support learning and adaption through experience (e.g. "Agile")

Reengineer Capabilities to better deliver better products while reducing costs

- Not just automate for "better sameness"
- E.g. "self service" channels should displace "in person" over time
- E.g. Kindle books displace physical books

Develop a considered As-is, Can be, Should be integrated approach

- i.e. "Should be" is directional, but not part of a plan
- Not just provide a list to be cherry picked

Position as early majority, main street on the Technology adoption curve

- Benchmark wherever possible
- Only early adopter with a compelling case, opportunity
- Laggard generates frustration

Make an informed trade-off between desires and needs

- Some needs may not appear attractive but are pre-requisites to desires
- ROI is appealing, but very difficult for new products and infrastructure

Address Life-Cycle issues, not just initial technology adoption

- Products and services require governance mechanisms, service organizations, backup, recovery, continuity etc.

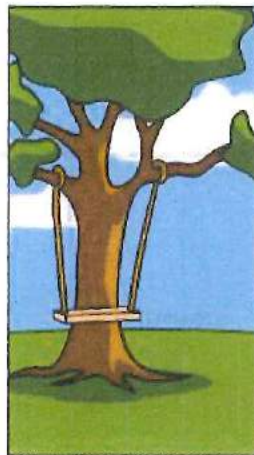
Guiding Principles apply
to each deliverable



"Requirements" ... a long standing joke ... and a disturbing truth



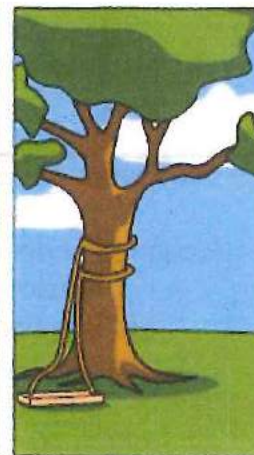
How the customer explained it



How the Project Leader understood it



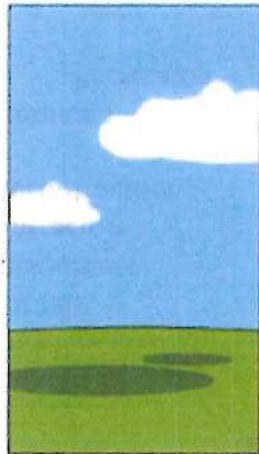
How the Analyst designed it



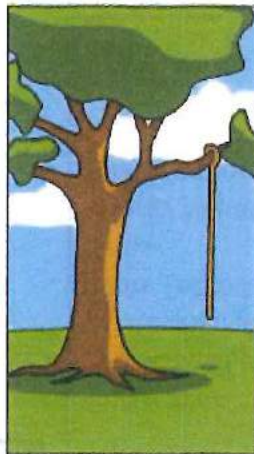
How the Programmer wrote it



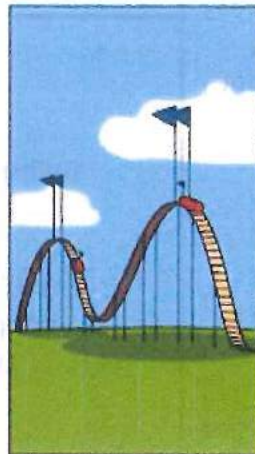
How the Business Consultant described it



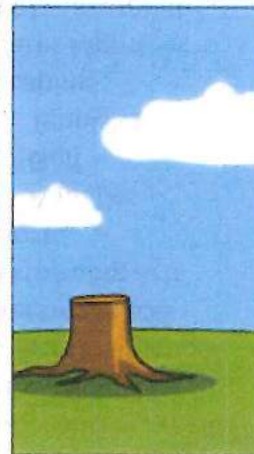
How the project was documented



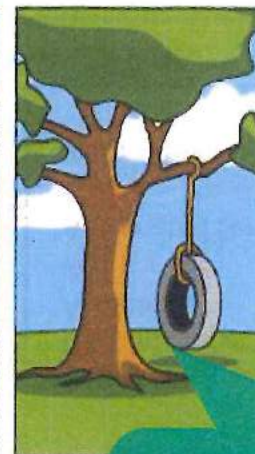
What operations installed



How the customer was billed



How it was supported



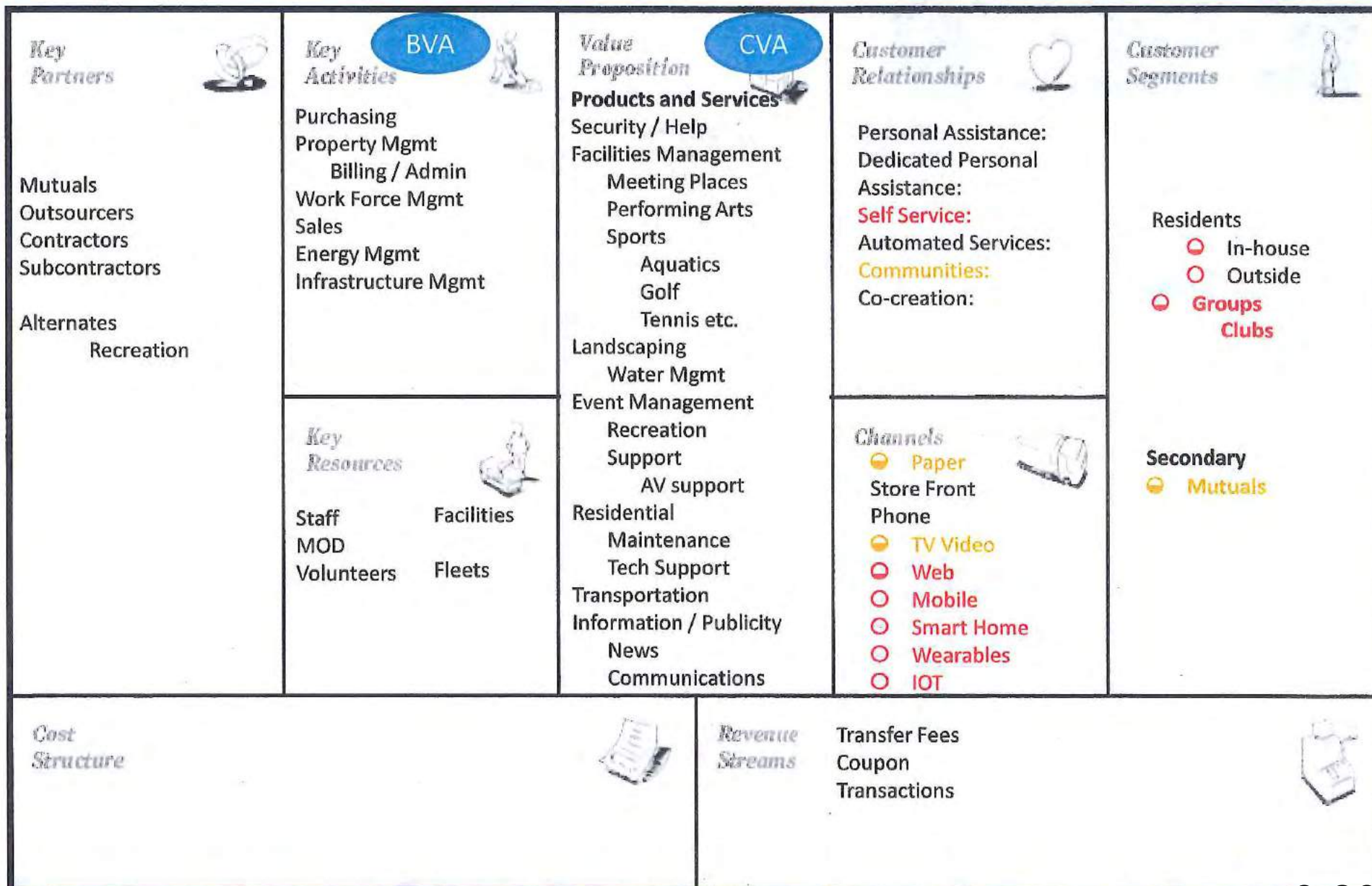
What the customer needed

"Requirements" ...
Words don't work without
DESIGNING something



B. Business Model ... a starter

<https://ingenia.wordpress.com/tag/business-model/> ... https://en.wikipedia.org/wiki/Business_Model_Canvas



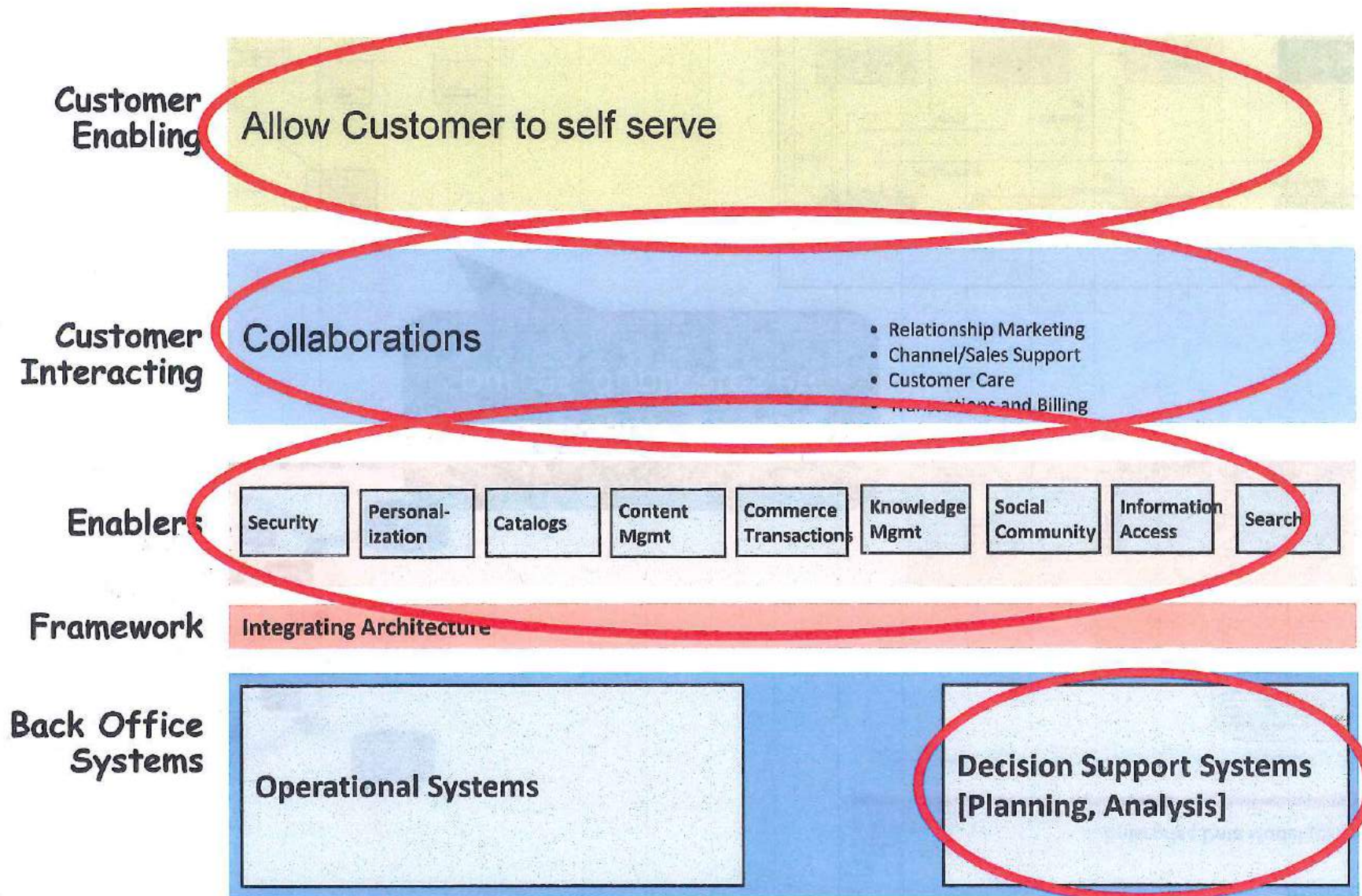
CPARS color schemes give charts instant clarity

None **Poor** **Some** **Good** **Excellent**

3-26



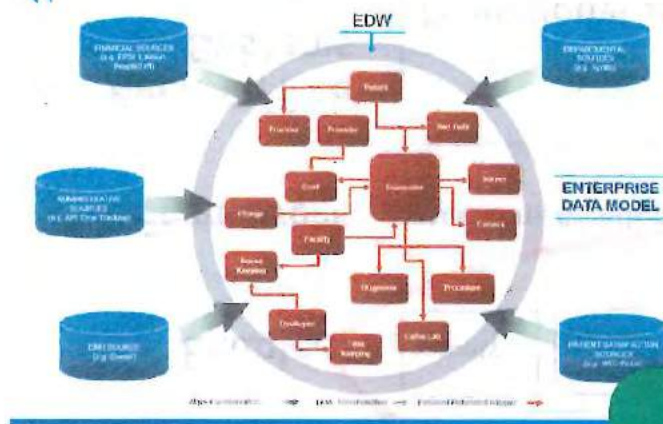
C. Applications





C. Data Architecture

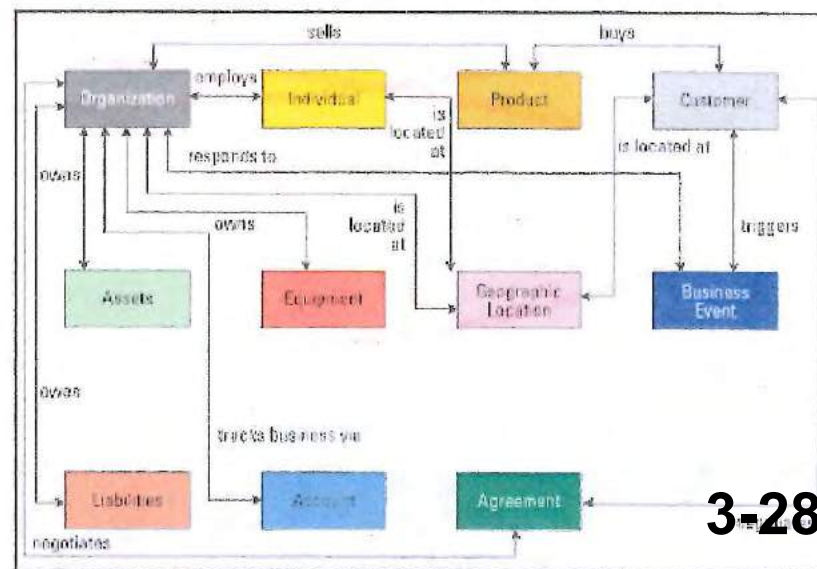
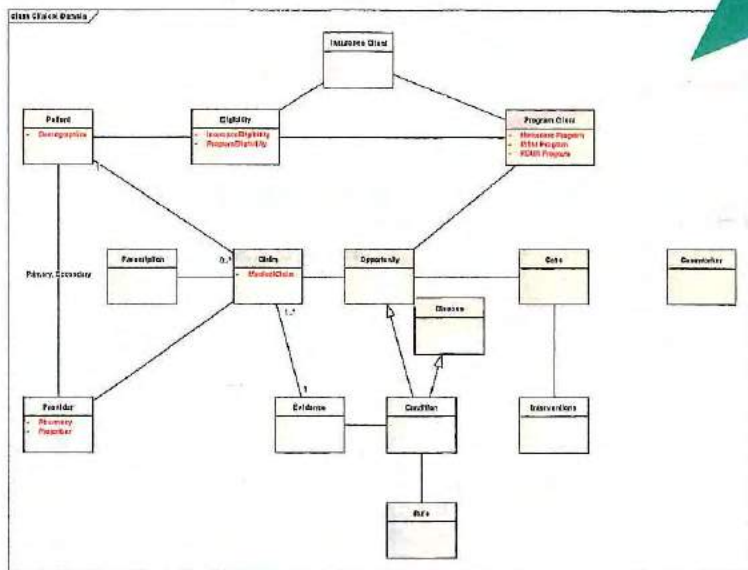
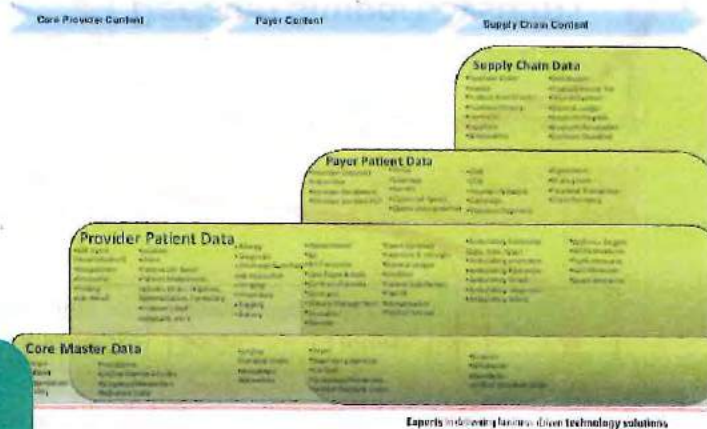
Enterprise Data Model



TBD ... show existing sources, duplicates etc.



Enterprise Data Model (example)

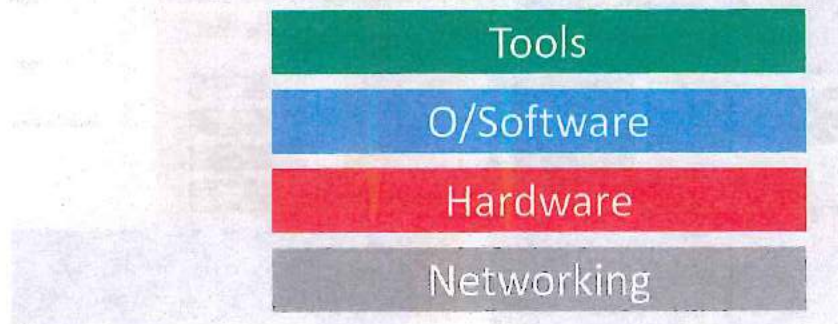


3-28

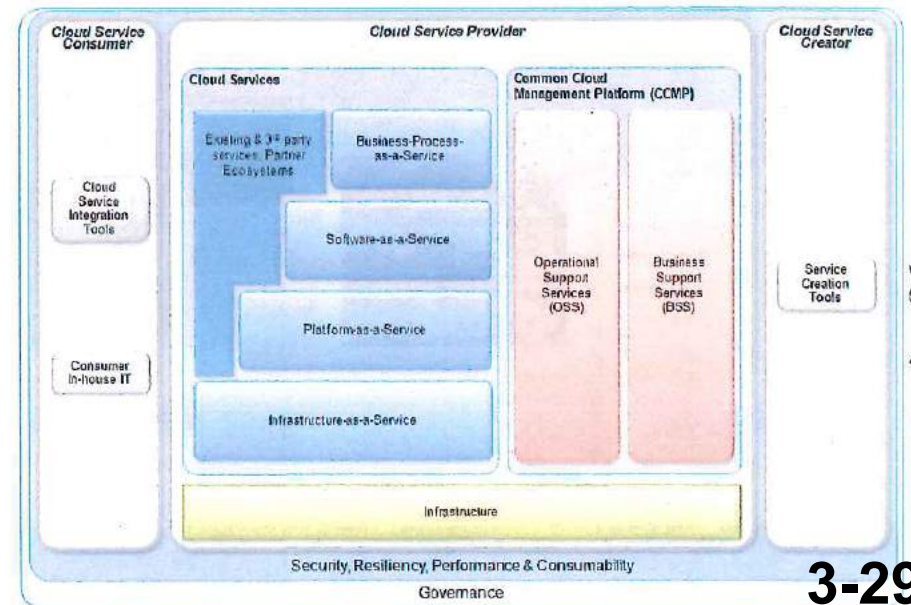
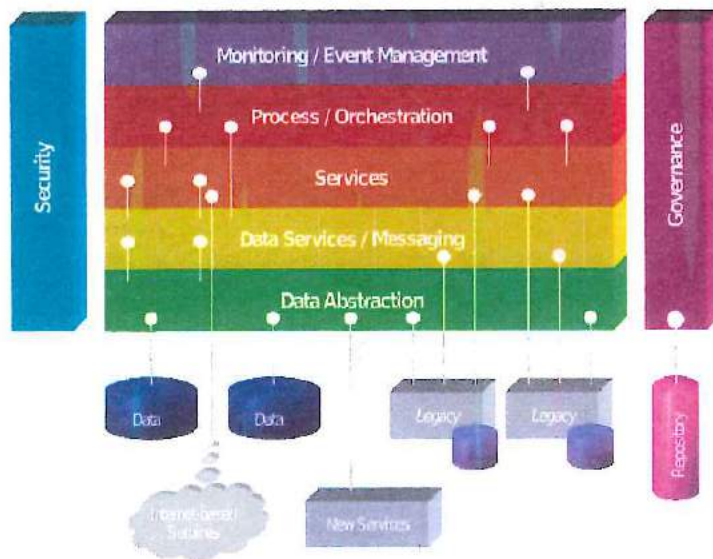


D. [Technical] Infrastructure

Platform Architecture



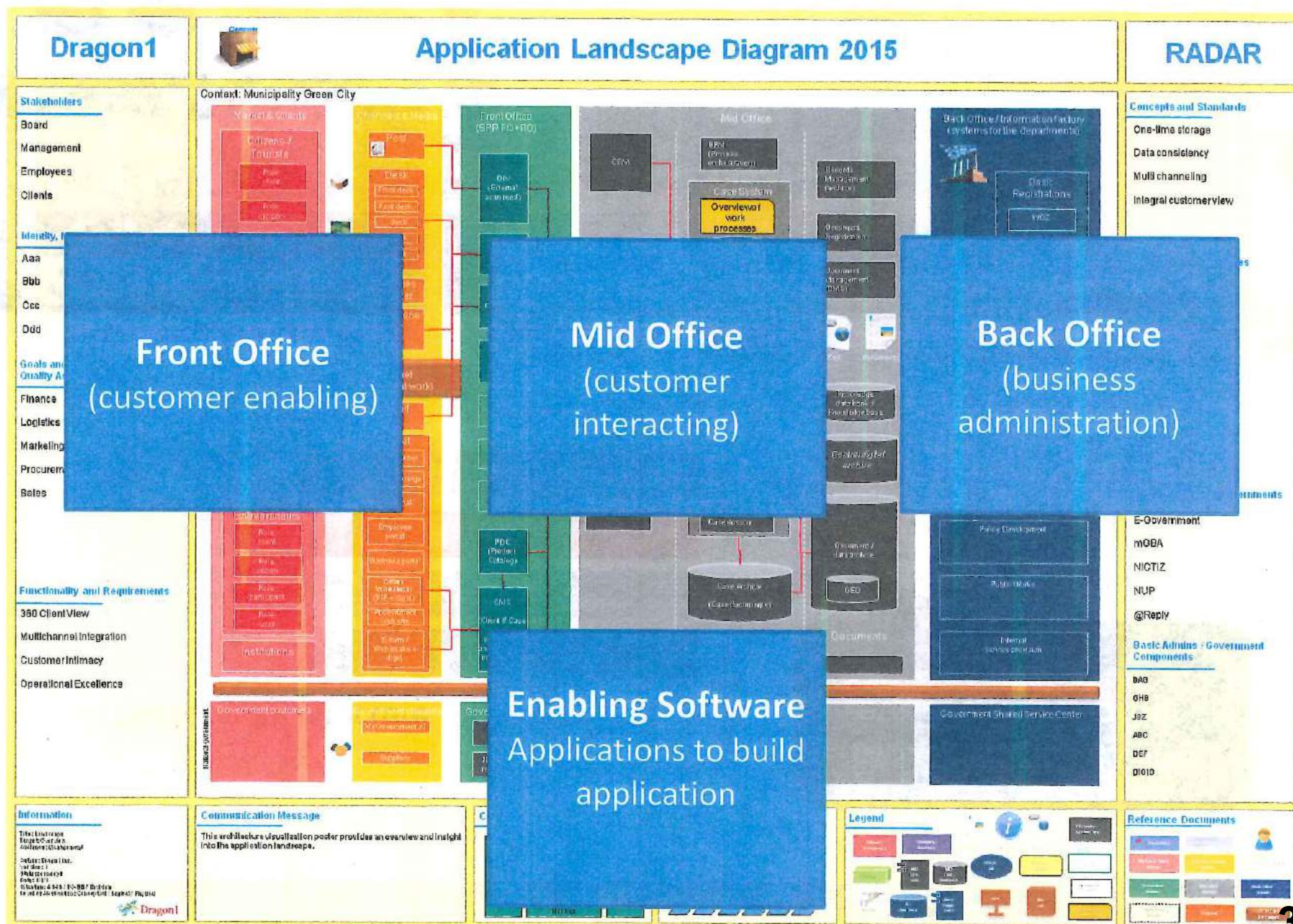
EVs, Self-driving cars,
etc. are just another
platform



3-29

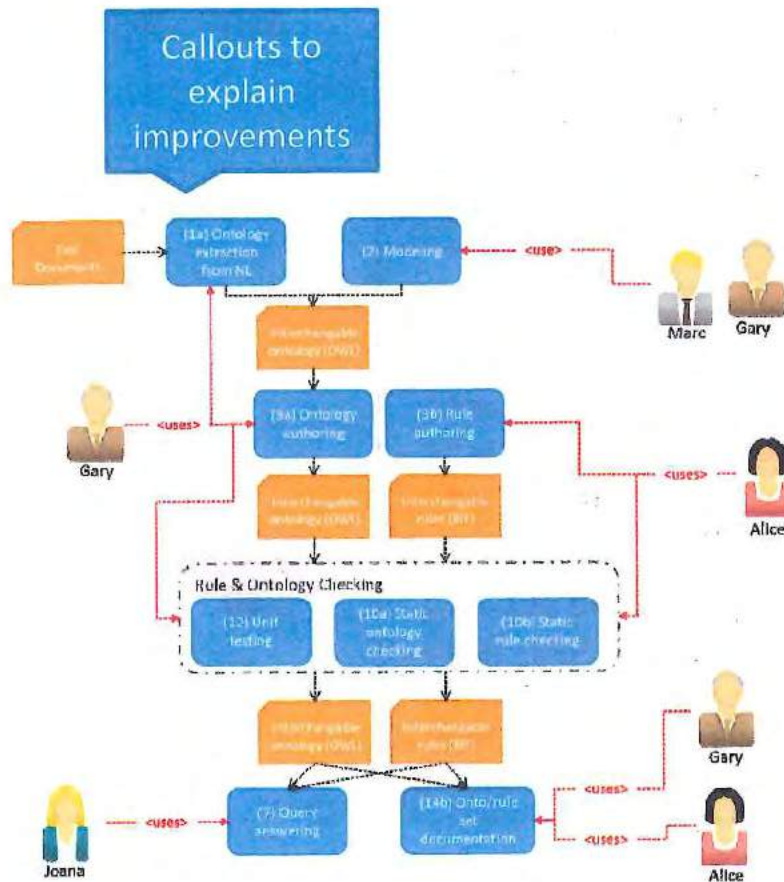


C. Applications ...



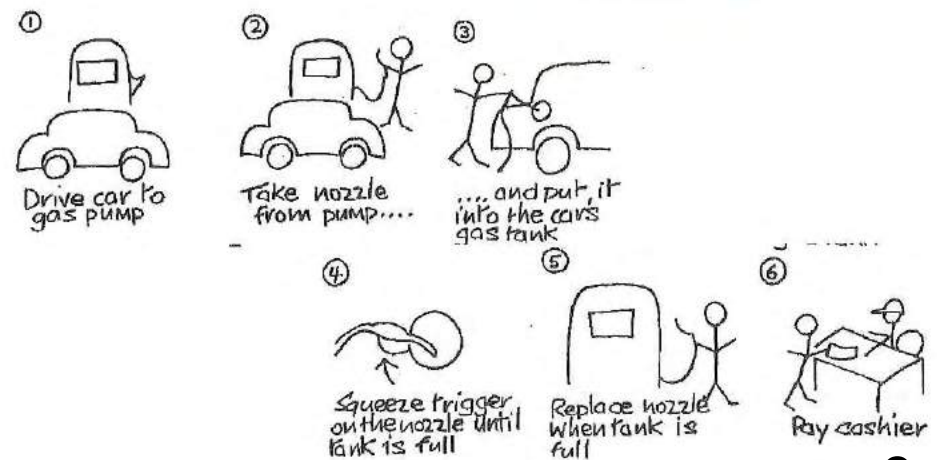


E. Opportunity: Solution Process Scenario



"Cartoon" or Diagram that quickly captures and illustrates the concept, with markups for key feature, benefits

Key feature ...
90% online service



3-31



E. Opportunity: Basis For Interest Template



Problem/Opportunity <ul style="list-style-type: none"> • Customer <u>problem/opportunity</u> the solution addresses • Most likely <u>causes</u> • How the solution will <u>address</u> the issue 	Solution Concept <ul style="list-style-type: none"> • <u>Definition</u> and description of the solution • Value proposition and implicit promise to the customer (end-user) • <u>Features and benefits</u> • <u>Enabling technology</u>
Basis for Success <ul style="list-style-type: none"> • <u>Fit</u> with core competencies/ experience base • <u>Uniqueness</u>/ differentiation of the solution • <u>Sustainability</u> of the solution 	Target Audience <ul style="list-style-type: none"> • <u>Industry</u>/ industries this solution addresses • Market <u>segment(s)</u> and estimated size • Customer <u>selection criteria</u> • <u>Specific</u> existing and potential <u>customers</u>
Critical Success Factors <ul style="list-style-type: none"> • <u>Imperatives</u> that must be accomplished • <u>Barriers</u> that must be overcome <ul style="list-style-type: none"> • Business System Diamond Gaps • <u>Competitor's</u> offerings and likely response 	Economics <ul style="list-style-type: none"> • Attractiveness of the economics for the <u>customer</u> • Attractiveness of the economics for the <u>provider</u>
Functionality <ul style="list-style-type: none"> • Major feature and functions required • Major enabling technology implications 	

From
Christopher
Slee
For Illustrative
Purposes



Technology and Innovation

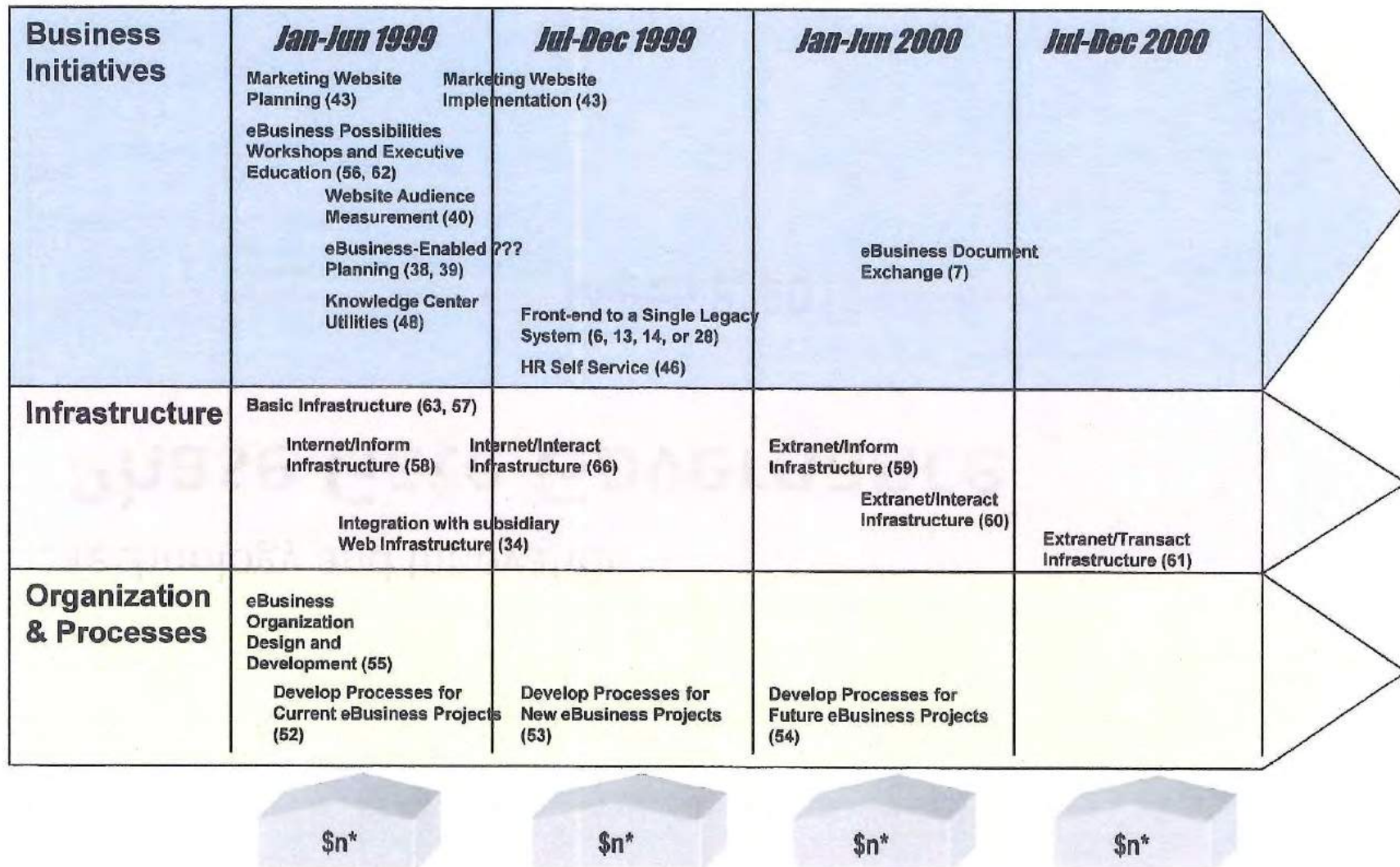
Phase Gate Governance

March 8, 2017



F. Proposed <client> eBusiness Roadmap

Internet/Interact

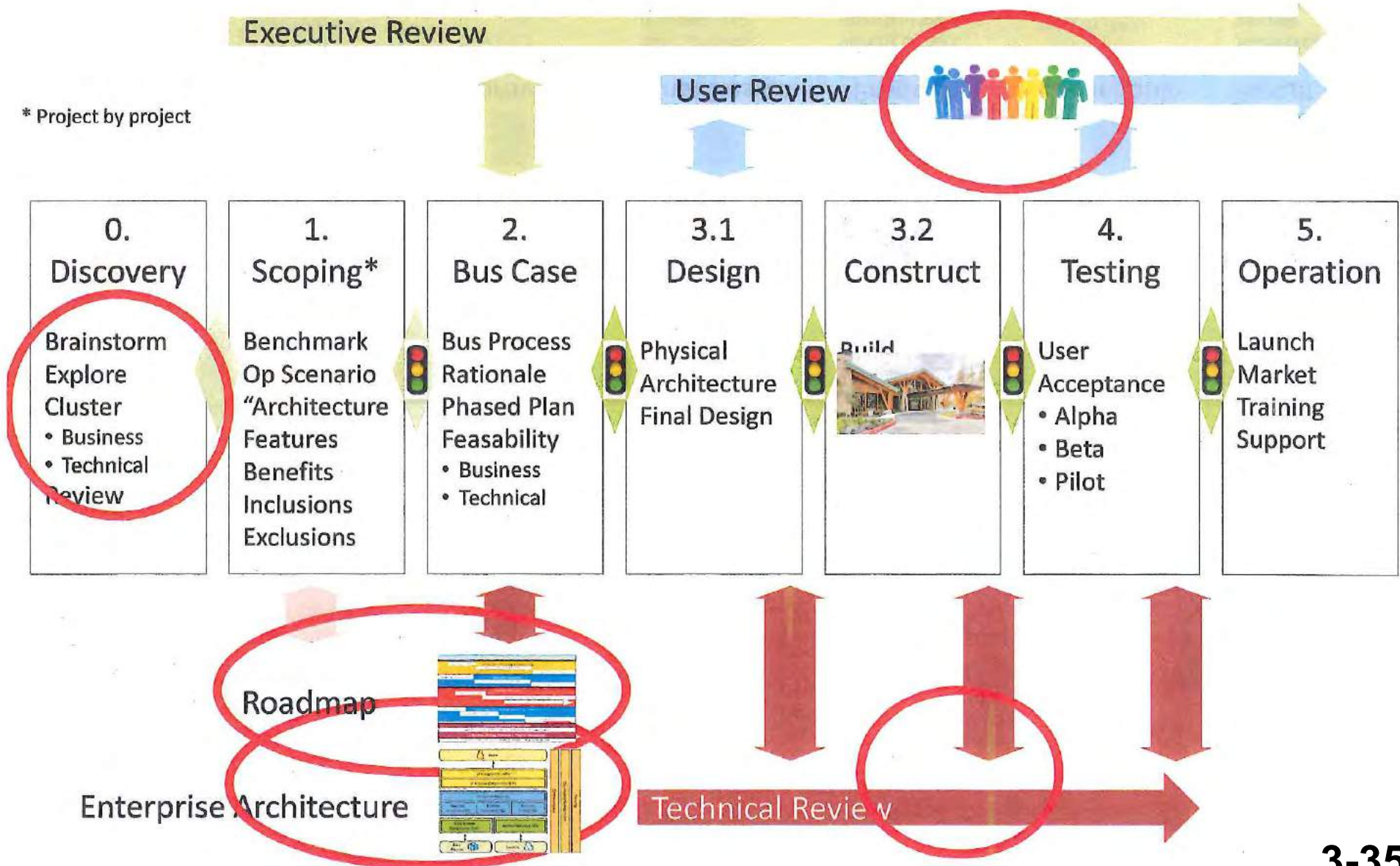


*Annual recurring costs are not included.

Diagram does not specifically illustrate dependencies among initiatives.



Major Holes in the Current Process

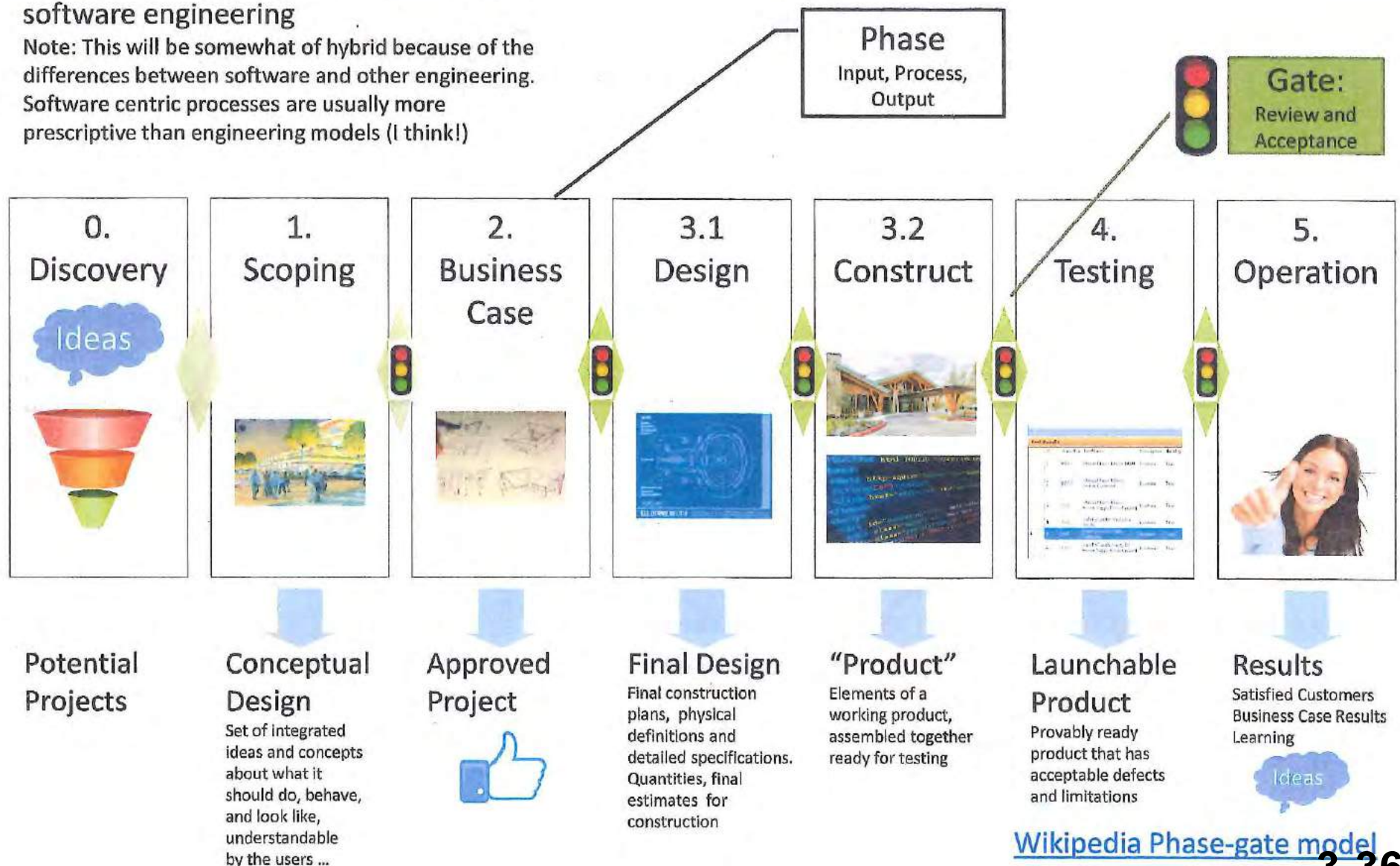




A Phase-Gated Process

Accepted best practice in engineering,
software engineering

Note: This will be somewhat of hybrid because of the differences between software and other engineering. Software centric processes are usually more prescriptive than engineering models (I think!)



3-36



0. Discovery

0.

Discovery

Brainstorm

Explore

Cluster

• Business

• Technical

Review

Cluster and Prioritize

Cannot cherry pick projects in isolation ... may be "Bite the Bullet" items

Idea Funnel

Ideas come to the Director of Capital Projects (DCP) from everywhere:

- Member comments
- Member surveys
- Amenity user comments
- Board input
- Input of General Plan Committee (GPC)
- Staff input
- TD.com feedback
- Town hall meetings
- Other sources

Ideas rejected may be put into the funnel by anyone at any time.

Preliminary Idea List

All Ideas are put on the Preliminary Idea List, which is circulated quarterly to the Board, GPC & posted on website.

Preliminary Idea Review

GM & Staff

Board GPC Liaison

GPC Chair

Preliminary Project List

Circulated quarterly to Board, GPC & posted to website.

"If you don't know what you don't know" Explore, Benchmark, Research, Visit, Survey

Critical Benchmark Tech Adoption Curve Leading? Lagging?



7/8/2016

General Manager (GM) & Staff, Board of Directors GPC Liaison, and GPC Chair review Preliminary Idea List. Other reviewers may be invited, such as Finance Committee (FC) Chair. Based on their knowledge and judgement, ideas are categorized as follows and posted on the website.

- 1 - Next few years
- 2 - Next five years
- 3 - Future years
- 4 - Operational
- 5 - ...

Ideas Preliminary the g may

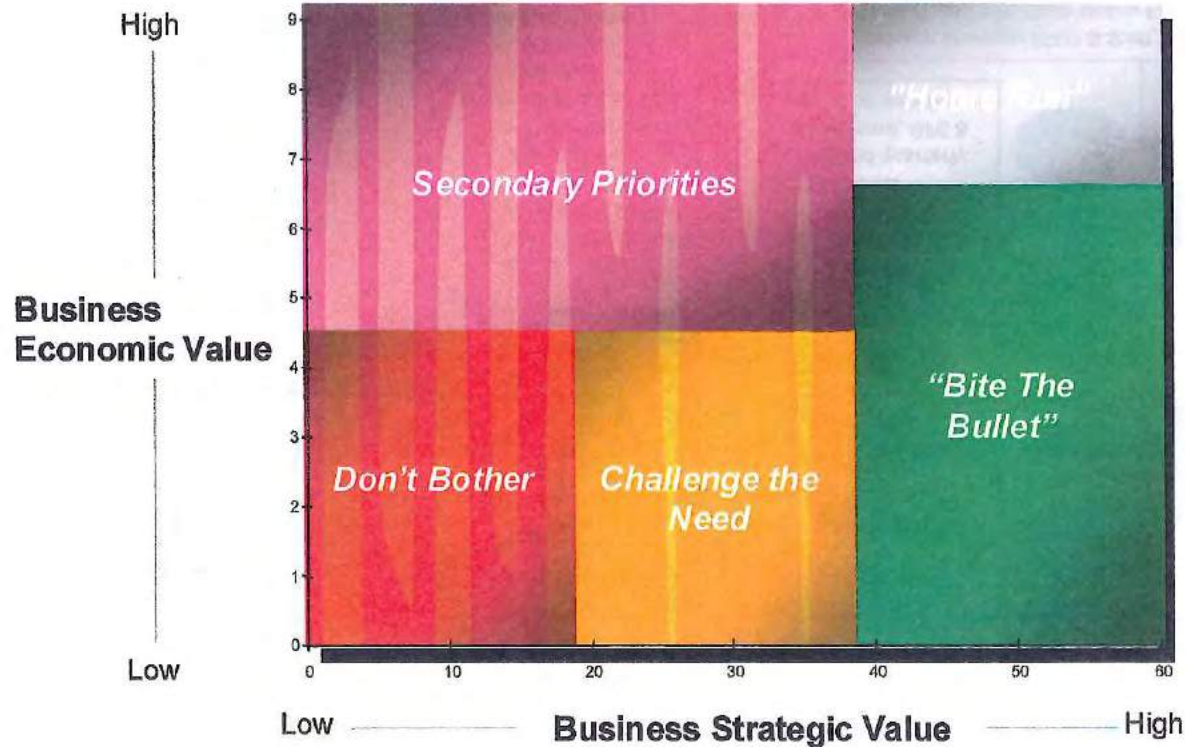
Will need some "tweaking"

DCP follow
• F
op
• S
mi
• F
inf
• C
• F
AC
sa
• C
im
• F
ev
Pl



Plan Scenarios

Each business scenario is qualified and a high level business value calculation completed, resulting in prioritized action recommendations based upon Business Economic Value and Business Strategic Value.



Business Economic Value

- Revenue Potential
- Market Size
- Potential Market Share
- Environmental Factors

Business Strategic Value

- Does the scenario adhere to corporate values?
- Does the scenario improve the corporations image?
- Does the scenario move the corporation closer to it's ultimate goal?



1. Scoping

1. Scoping*

Benchmark
Op Scenario
"Architecture"
Features
Benefits
Inclusions
Exclusions



DCP writes PIPs, which include the following:

- Reason for the project (need or opportunity for improvement)
 - Scope of the project and how it meets the need or opportunity
 - Financial Impact as an information-stage estimate
 - Customer service impact
 - Risks such as environmental, ADA, code compliance, health & safety
 - Opportunities such as energy impact, operational improvement
 - Alternatives available and evaluation of their impacts
- PIPs are posted on the website.*

More detailed
Feature / Benefits
Scope

Problem/Opportunity <ul style="list-style-type: none"> • Customer <u>problem/opportunity</u> the solution addresses • Most likely <u>causes</u> • How the solution will <u>address</u> the issue 	Solution Concept <ul style="list-style-type: none"> • <u>Definition</u> and description of the solution • Value proposition and implicit promise to the customer (end-user) • <u>Features and benefits</u> • <u>Enabling technology</u> • <u>Approach used to deliver the solution</u>
Basis for Success <ul style="list-style-type: none"> • <u>Fit</u> with core competencies/ experience base • <u>Uniqueness/</u> differentiation of the solution • <u>Sustainability</u> of the solution 	Target Audience <ul style="list-style-type: none"> • <u>Industry/</u> Industries this solution addresses • Market <u>segment(s)</u> and estimated size • Customer <u>selection criteria</u> • <u>Specific</u> existing and potential <u>customers</u> and functions affected • <u>Likely Adoption demographics</u>
Critical Success Factors <ul style="list-style-type: none"> • <u>Imperatives</u> that must be accomplished • <u>Barriers</u> that must be overcome <ul style="list-style-type: none"> • Business System Diamond Gaps • <u>Competitor's</u> offerings and likely response 	Economics <ul style="list-style-type: none"> • Attractiveness of the economics for the <u>customer</u> • Attractiveness of the economics for the <u>provider</u>
Site Functionality <ul style="list-style-type: none"> • Major featu • Major enac 	

Features vs. Benefits

Examples: "Which Means to You"

Feature	Benefit
"Been in business for 23 years"	Service provider longevity/POM
"Low E glass"	Mirror for heat/Sunscreen
"Constant Force Balance System"	8000 cycles = >20 years longevity
"Fusion Welded Frames and Sashes"	Durability, energy savings
"Argon Gas"	Swimming pool
"Warranty"	Durability, longevity, POM





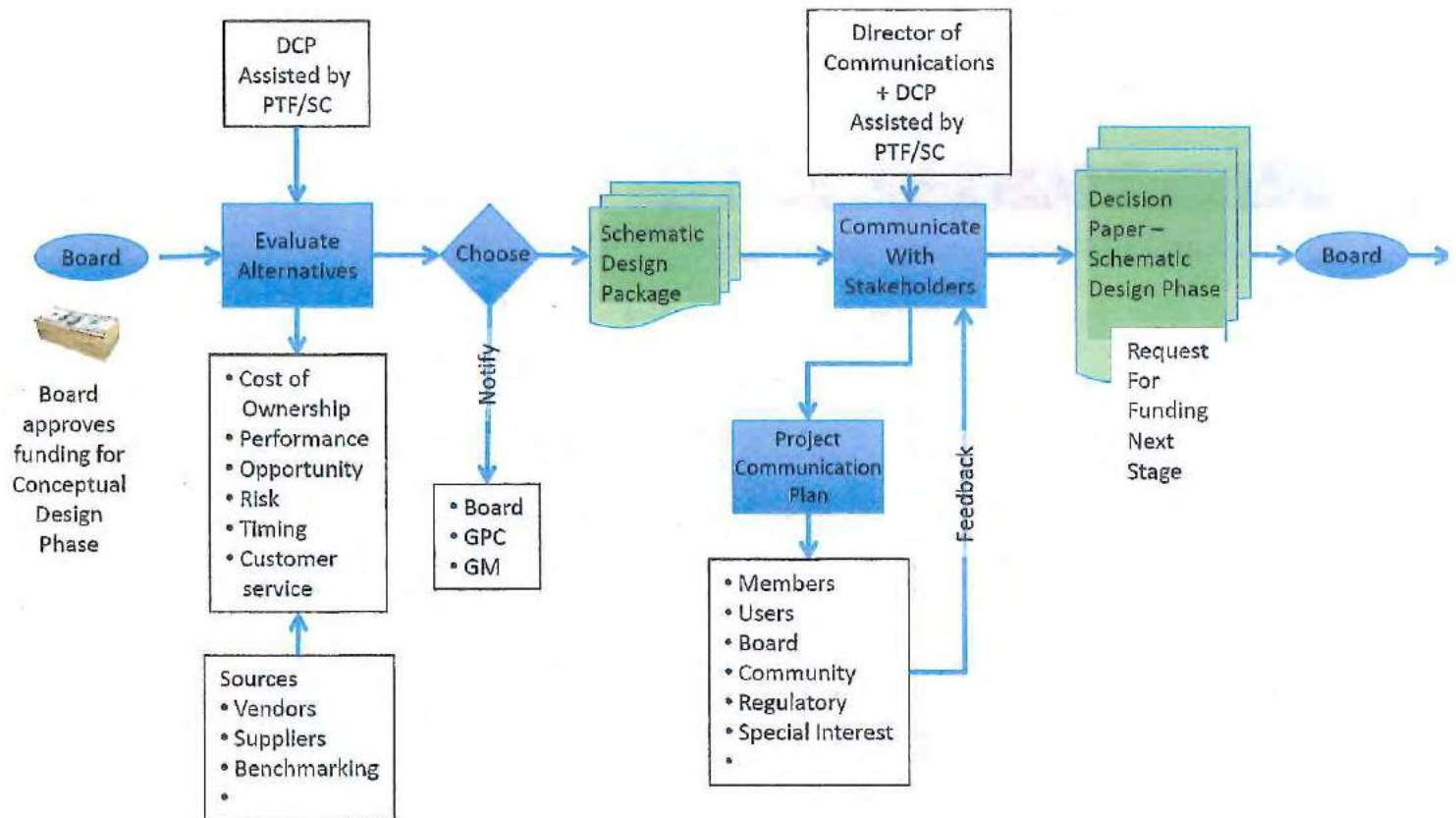
2. Business Case

2.

Bus Case

Bus Process
Rationale
Phased Plan
Feasibility

- Business
- Technical
- Cost/Ben



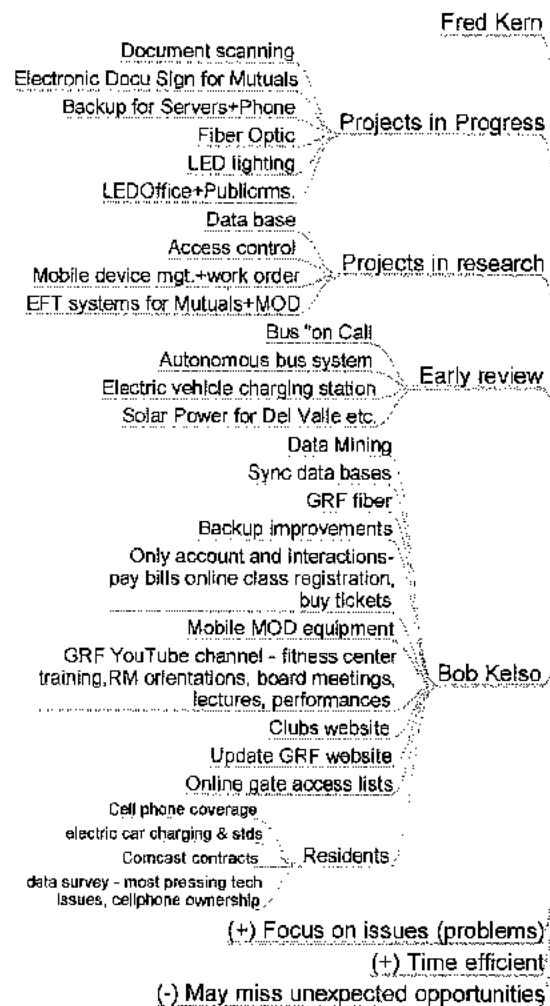
Rossmoor ad-hoc Technology Committee

Projects already identified and moving into Design/ Implementation stage	Projects identified in research stage	Projects identified - Still in early review stage	Down the Road projects
Document Scanning Projects	Multiple Data Base Integration project/s	Bus "on Call" system	Electric Buses (need Grant \$)
Electronic Docu Sign for Mutuals	Access Control systems	Autonomous Bus System	Web Site Update
UPS and Backup Power for Servers and Phone systems	Mobile Device Management & Online Work Order systems	Electric Vehicle Charging Stations	
Fiber Optic Cable Replacement Project	EFT systems for Mutuals and MOD	Solar Power Generation Del Valle/Gateway/etc.	
LED Street lighting Project			
LED Office and public rooms Project			

**Nice to have? /Maybe/Special
interest**

Rossmoor wide Cell towers

Rossmoor owned WiFi



Technology: Two Conceptual Approaches

See my previous handout
Disruptive Innovations -
Pathway to the Future
(+) Possibility of discovering
new opportunities
(-) Time-consuming
(-) Inefficient

Heinz Wehrich, 10-16-17
RMTecCpm2Approaches10-18-17.twd

GRF Ad Hoc TECHNOLOGY COMMITTEE

Draft Strategic Technology Plan Process 2017-18▶

Draft by Mary A. England, Chris Slee ▶ 10/26/2017 ▶

Note: this document should is a DRAFT & will be continuously improved throughout the process. Some diagrams, graphics, processes are “placeholders”, pending Committee & sub-committee input of actual GRF processes.

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Glossary

Acronym	Term	Explanation
BFI	Basis for Interest	Summary Outline of an Initiative of Project
PDP	Project Definition Document	Detailed definition for a specific Project
TOGAF	The Open Group Architecture Framework	
ROI	Return on Investment	Cost-savings, Operational efficiencies, years to payback
OPN	Operations	Operational Units, functions, divisions, departments
COA		
AOR	Area of Responsibility	Scope of responsibility of Operational Unit, function, division, departments
BVA	Value Added	
CVA	Value Added	

Introduction

Background:

The Golden Rain Foundation (GRF) Ad Hoc Technology Committee is engaged in a GRF Strategic Technology planning process. The output of the committee will be a GRF Strategic Technology Plan that:

1. Evaluates and assesses the existing and future-state of GRF technologies.
 2. Anticipates GRF's technology needs for next 5 years
 3. Develops a Plan that delivers integrated, systematic approach for identifying, prioritizing, implementing, and maintaining existing/new GRF services
 4. Evaluates solutions based on criteria which prioritize effective and cost-efficient GRF operations
 5. Delivers a timeline, roadmap, with milestones and deliverables
 6. Assesses GRF-related needs and recommend priority technology-related projects and processes
 7. Delivers preliminary and final recommendations for decision-making tools for GRF Board Committees and Board Directors
-

Project Management Process:

Committee recommends all GRF Projects, (proposed and funded) utilize a standardized Project Management Process. A standardized Project Management process flow is vital to GRF Technology-enabled Projects. It is recommended that in the future, staff, consultants, etc following a planned, step-wise process to define the project scope and impact of the project.

Coordination between GRF Board Committees:

Strategic Planning for GRF Technologies will need to coordinate with the GRF Board Planning & Finance & Policy Committee. GRF Committees will benefit by benchmarking "Best Practices" from similar communities with missions and services similar to GRF. The Committee needs to be acutely aware of the GRF need for financial and fiscal responsibility.

The GRF Strategic Planning Process Hierarchy of Initiatives, Projects

Let it be said “there are many moving parts” to an enterprise, an organization such as GRF. To make sense of the “many moving parts”, the Committee will need to categorize, organize, and structure our output. Although GRF Technology Project Areas can be categorized a number of ways, one such way of designating and defining a hierarchy of project priorities as follows:

A **GRF Technology “Initiative”** can be an umbrella for a collection of projects. An example would be the area of Universal Communications (see attached Initiative Definition Document). A Universal Communications Initiative will encompass a spectrum of projects, each necessary for GRF member and staff communication, anywhere, anytime, by any communication channel (voice, mobile device, email, text, web portal, etc).

A **GRF Technology “Project”** will have a more narrow scope than an Initiative. An example would be MOD Work Order System Project. (see attached **Project Definition Document**).

The Committee anticipates that there may be several “Initiative” level recommendations and a number of “Project” level recommendations. Projects may have significant dependencies which may elevate the dependencies, such as infrastructure requirements to the Initiative level.

Primary Committee Deliverables ... Some Examples

Although the **Process** will produce several **Deliverables**, the Initiatives, Projects, and Adoption or Implementation Roadmap are the recommendations that will be evaluated, adopted for funding and potential implementation. Other deliverables provide the Framework – Guiding Principles etc. – and the Coordinating Architecture – i.e. the way the parts fit together.

Some examples are useful to provide some context.

Basis for Interest Analysis: Example

This table is used for Phase 0: Idea , refined during Phase 1, Scoping, and 2 Business Case Development. It is intentionally a short 2-page summary document. It is a handy reference to explain a project or initiative.

A Basis for Interest analysis will be produced by sub-committees for ALL known initiatives and projects so that the GRF Board will have a COMPLETE catalog of all such GRF processes considered by the Committee. This happens whether or not it is a program recommended by this Committee or simply an existing initiative that this Committee discovers as part of its work. The table is recommended this is the FIRST step in any project or initiative and the first opportunity for the GRF Board to “gate” the process (See Phase Gate Planning Process below).

An example of the Table can be seen below. The GRF Universal Communications Initiative, describes “The ability to communicate from and to anyone by any channel, any device”.

Universal Communications Initiative

“The ability to communicate from and to anyone by any channel, any device”



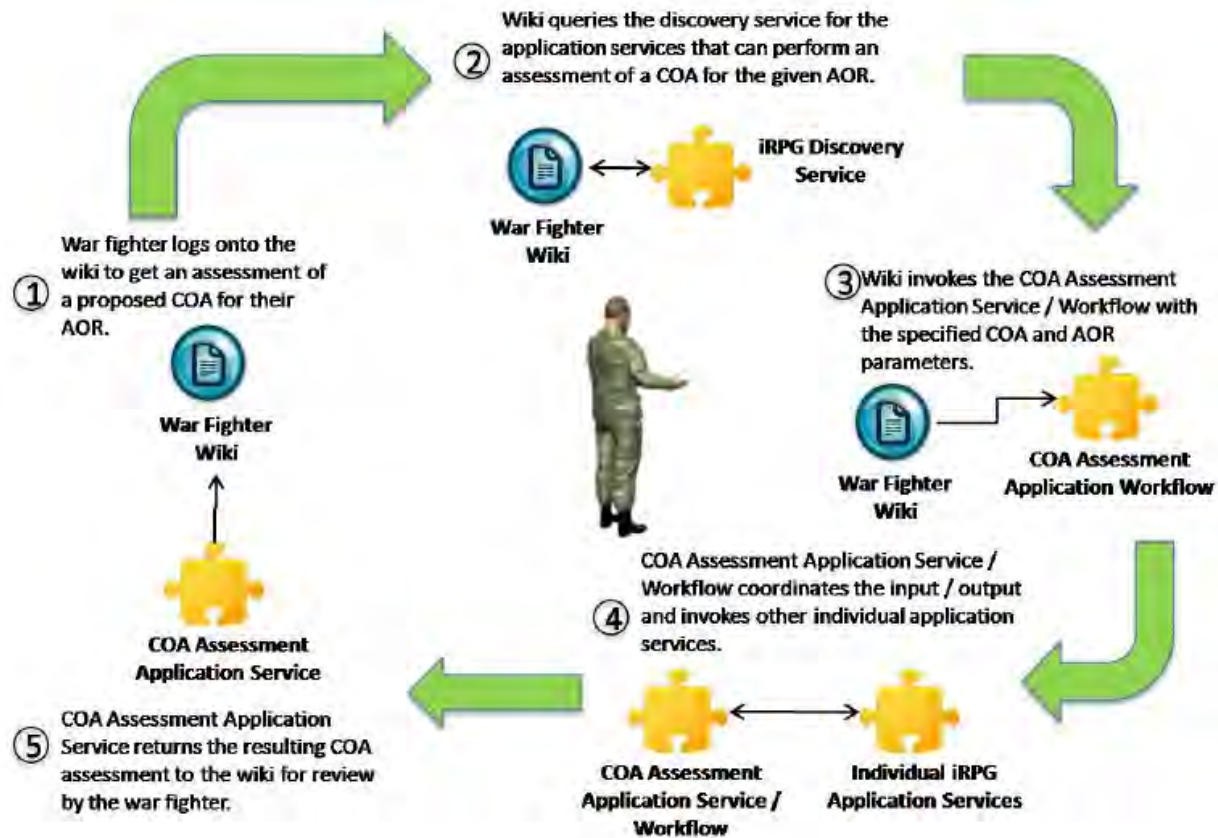
Problem/Opportunity <ul style="list-style-type: none"> Processes require flexible communications <ul style="list-style-type: none"> Any time, any place, any channel Showing consistent timely data Example problems <ul style="list-style-type: none"> Cannot email, text Securitas No kiosk forces paper sign ups and travel Cannot see if pickle ball courts are full 	Solution Concept <ul style="list-style-type: none"> Everyone has addresses for all channels <ul style="list-style-type: none"> Email, text, voice, video (e.g webcams) On all the time, with forwarding / failover With adequate bandwidth for video etc. <ul style="list-style-type: none"> All devices: e.g. TV, phone, PC, tablet, Enabling: Comcast connectivity? Mesh networking? Cell, webcams, Cast devices
Basis for Success (competences, assets) <ul style="list-style-type: none"> Assets: Cabling in many locations but poor bandwidth, coverage in common locations, <ul style="list-style-type: none"> Xfinity network Competences: Limited expertise in networking, management, ability to recognize opportunities and / or failure points 	Target Audience <ul style="list-style-type: none"> GRF, MOD, Residents, Mutuals Likely Adopters: Almost any application that requires mobility and/or remote coverage <ul style="list-style-type: none"> Especially health, safety related
Critical Success Factors <ul style="list-style-type: none"> Barriers: Geographic connectivity Universal directory of access info [longer term] <ul style="list-style-type: none"> Maintained and data accuracy “Touchpoint” integration for accuracy App integrations 	Economics <ul style="list-style-type: none"> GRF: Rework processes to save money <ul style="list-style-type: none"> E.g. work force updates, retasking Online open meetings Members: Decreased frustration Cost: TBD Benefits are derived by enabling apps
Dependencies <ul style="list-style-type: none"> Directory management (longer view) Comcast, ATT etc. to support channels 	Implementation Approach and Projects <ul style="list-style-type: none"> 1: Communications and addresses 2: Connectivity 3: Meeting room devices 4: Cell coverage improvement
Benchmarks <ul style="list-style-type: none"> Google Gives San Francisco Free Wi-Fi in Public Online cell coverage maps .. https://opensignal.com/ 	

The various boxes outline the initiative or project. The icons on the left:

- Identify where the program stands on the current industry Technology Adoption Curve. For example, is the proposed solution in an early adoption phase or lagging. And is GRF’s current position in this area visionary or late main street?
- Architecture Level: is this a new business service or product? Or an enabling technology?
- ?

Operations Concept Diagram: Example

A second page, an Operations Concept Diagram, can support the Basis for Interest. It illustrates the solution and highlights some of the most significant improvements, changes.





Project Definition: Example

This is a format based on one from “Manage a Great Project” .co.uk

The Project Definition is more

Include an example ... even if only partially done.

This Committee Roadmap is a suggested timeline for specific milestone and draft deliverables for the first 9 months of Committee work.



The Committee will also deliver a GRF Strategic Technology Roadmap which prioritizes Initiatives and Projects based on dependencies such as:

1. Infrastructure acquisition and implementation precedes many "end-user" projects
2. Cost-savings, operational efficiency, revenue generating projects take precedence over "nice to have" projects
3. Business Continuity is priority over "end-user" projects or "nice to have" projects. This GRF area is a necessity business imperative. (addressing technologies for emergency/disaster readiness, response, recovery for a resilient organization.)

Phase-Gated Planning Process

See https://en.wikipedia.org/wiki/Phase-gate_process

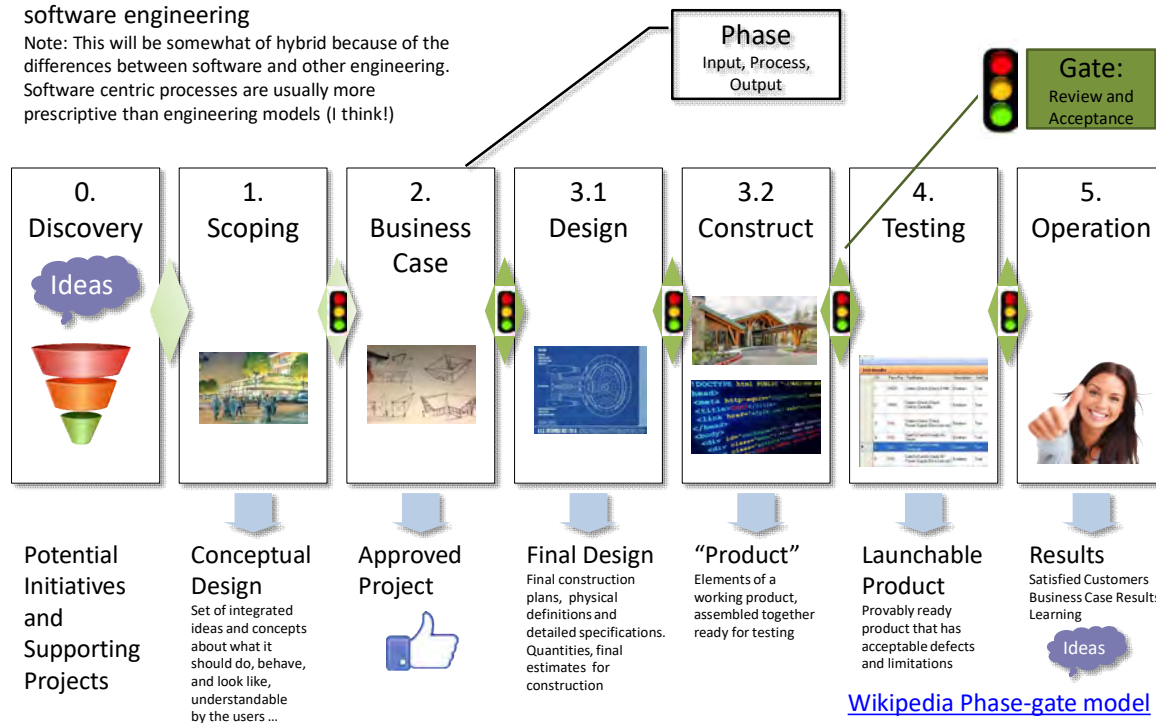
The Committee utilizes a Phase-Gated Planning Model for developing and evaluating future Technology related projects recommendations. This is an industry standard approach for engineering, architecture and other technology projects. It is broadly similar to parts of methodologies used for software, though software has increasingly diverged from the waterfall model in steps 3 and 4 to adopt more “Agile” techniques that are made possible by the unique characteristics of software.



A Phase-Gated Process

Accepted best practice in engineering,
software engineering

Note: This will be somewhat of hybrid because of the differences between software and other engineering. Software centric processes are usually more prescriptive than engineering models (I think!)



The Committee will move initiatives through the first three phases -- Phase-Gated Planning. This presents the opportunity for project review and acceptance at the completion of each of the following initial phases:

0. Discovery Phase: Ideas are generated for potential Initiatives.

1. Scoping Phase: Set of integrated ideas, concepts about what it should do, behave and look like, defined to be understood by the end users of the project

2. Business Case: Outlining the business process(es) which will benefit from the Initiative, Project, to incorporate analysis of the investment costs and business benefits

0. Discovery

Ideas can come from many directions

- Members
- GRF Staff and MOD
- Board and supporting Committee(s)
- Mutuels

And can be generated in various ways

- Current operations, issues and opportunities [As-Is]
 - Systematic surveys
 - Walk thrus, “Staple Yourself to an Order”¹
 - Financial Analysis of existing cost structures – capital, people and operating costs
- New product / service opportunities
 - Customer needs and problems
 - Customer “holes” ... where there is no product or service solution available
 -
- New or existing technologies that have not yet been applied
- Benchmarking
 - Thru research or site visits

The Committee uses Basis For Interest forms to evaluate the Preliminary Idea List and decide which should move into the next phases.

¹ <https://hbr.org/2004/07/staple-yourself-to-an-order>

All ideas are put on the Preliminary Idea List, which is circulated quarterly to the Board, GPC & *posted on website*.

1. Scoping

A GRF Initiative or Project needs to be analyzed in detail. One method to analyze the Scoping can include:

Steps, considerations

- Reason for the project (need or opportunity for improvement)
 - Scope of the project and how it meets the need or opportunity
 - Financial impact as an information-stage estimate
 - Customer service impact
 - Risks such as environmental, ADA, code compliance, health & safety
 - Opportunities such as energy impact, operational improvement
 - Alternatives available and evaluation of their impacts
-
- Benchmark
 - Operating Scenario
 - “Architecture” ... how the parts fit together
 - Features
 - Benefits
 - Inclusions
 - Exclusions

PIPs are posted on the website

Exit Gating

- Committee decides which should be moved into next phase

2. Business Case

Selection Criteria for Initiative & Project Prioritization

The Selection Criteria for Initiative Project Prioritization are of critical importance in making recommendations to GRF Board decision-makers.

Categorizing Criteria can be helpful, e.g.:

1. Customer Derived Value
2. Financial & Operational Criteria (Operational cost-savings, Improved operational efficiency)
3. Feasibility based on dependencies Criteria (Infrastructure requirements take precedence)
4. Business Continuity Criteria (Disaster Readiness & Recovery for Business functions, Communications Channels)
5. Timing and Sequencing Criteria (1, 2, 3 above drive early, near, or late-term approval)

Business Case and Strategic Evaluation of Technology Options

Presenting optional solutions (or none recommended) to the GRF Board will require rigorous evaluation of Technical Solutions.

Evaluating potential solutions to identified operational issues in GRF business processes will need to ask questions focused on:

how to evaluate possible technologies as solutions (Benchmark solutions) and what components of a project each optional solution may address? In order to evaluate optional solutions, we look at the following and evaluate the solution based on:

1. Priority
2. Problem
3. Pricing
4. Platform
5. Product
6. Performance
7. People
8. Potential
9. Process
10. Pitfalls

The technology evaluation chart (page ? 28) highlights the information involved in this process.

Deliverables

Introduction

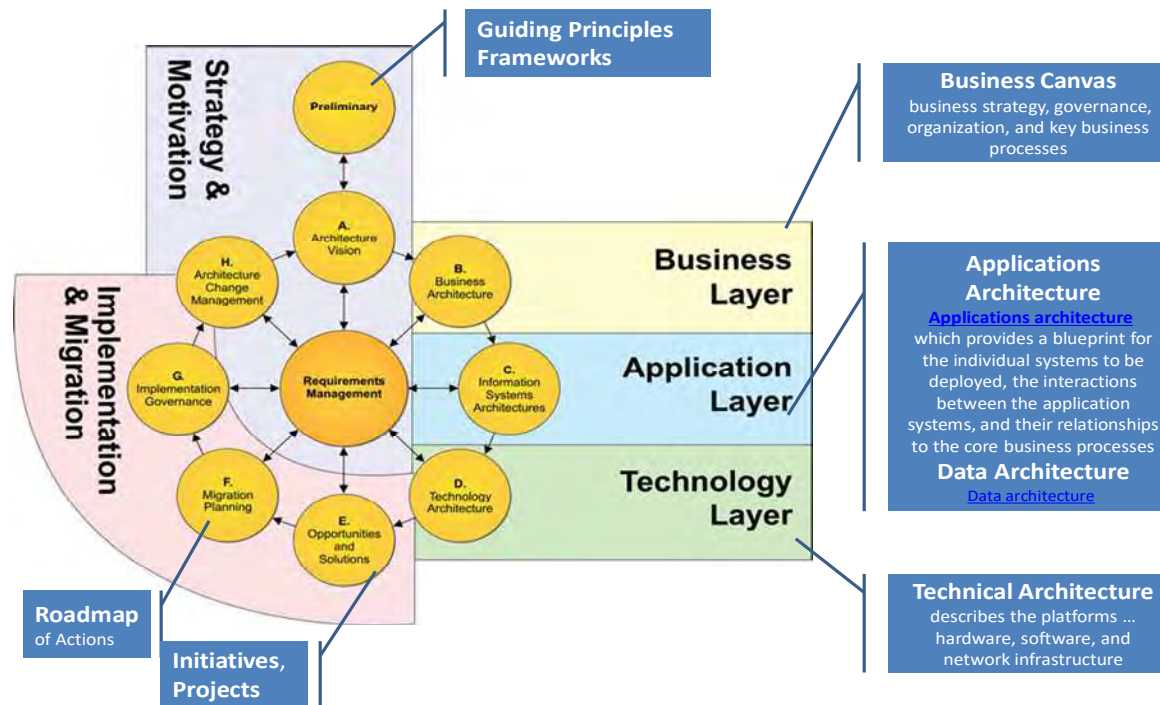
Deliverables broadly follow a simplified version of an Enterprise Architecture.

“Enterprise architecture (EA) is “a well-defined practice for conducting enterprise analysis, design, planning, and implementation, using a comprehensive approach at all times, for the successful development and execution of strategy. Enterprise architecture applies architecture principles and practices to guide organizations through the business, information, process, and technology changes necessary to execute their strategies. These practices utilize the various aspects of an enterprise to identify, motivate, and achieve these changes.”²

The Open Group Architecture Framework (TOGAF)³ is a leading approach and taken at a high level, provides a solid guide for the elements a Technology Plan needs to address.



Enterprise Architecture Elements ... Framework ... What and Why?



² https://en.wikipedia.org/wiki/Enterprise_architecture

³ https://en.wikipedia.org/wiki/The_Open_Group_Architecture_Framework

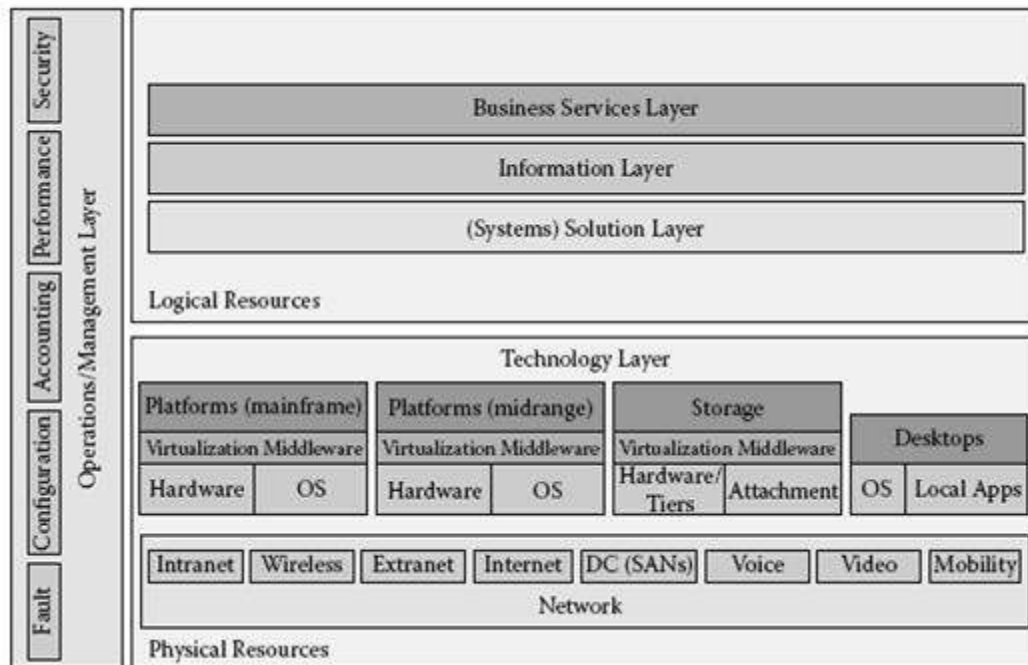
A. Coordinating Architecture Elements

These ultimately ensure that Initiatives and Project fit together in a way that makes the Roadmap feasible. For example, one business initiative relies on an enabling tool that must be added to Technical Architecture before it can be attempted. So the enabling tool must appear in the Roadmap before attempting the Business level initiative.

- Guiding Principles and Frameworks
 - These are “tests” to ensure that the other components are heading in the right direction.
- Business Architecture
- Applications Architecture
- Data, Information Architecture
- Technical / Platform Architecture

Conceptually these elements fit together on a single diagram. Pragmatically, this is difficult to achieve in a single diagram and often confusing to the audience. This chart will be useful when GRF Operations are identified in the layers and boxes below. (From⁴)

⁴ http://www.ittoday.info/Articles/What_Is_Enterprise_Architecture.htm#.WfF8_miPLBU



Guiding Principles

The Committee understands that technology for technology sake is interesting research science but not useful unless applied successfully. The march of technology has been to inject a new form of capital into processes – improving effectiveness and efficiency – in service of better outcomes for customers. Typically this involves relocating people from day-to-day operations into higher valued added work. For example:

- Newspapers and books are increasingly electronically based with authors and editors directly gathering and producing content.
 - Typesetters and printers have largely gone by the way side.
 - Many news outlets have now never had a print medium.
 - Now Kindle books are displacing physical books
- Vacuum cleaners and polishers replaced brushes, mops and scrubbing;
 - Roomba threatens to remove much of the need for human control of vacuum cleaners
- Online transactions have replaced travel. Self service is now the norm.
 - Web search is the norm for discovering travel opportunities.
 - Travel agents have been eliminated from simple ticket sales and pushed up into higher value travel coordination
 - Tickets are issued online, printed locally, or not at all. Mobile phones and other devices are replacing physical paper.

B. Business Level

- Strive for better customer products and services delivered more effectively and efficiently
- Deliver the products and services customers expect and /or will appreciate
 - Not just the ones we [currently] [choose to] provide
 - Ease of End user experience is key
 - Support learning and adaption through experience (e.g. “Agile”)
- Favor newer and prospective customers
 - They bring expectations essential to ongoing progress
 - Long term customers are too often
 - satisfied with lower expectations and resistant to change
 - prone to leave, frustrated after silent, resigned acceptance
 - Relevance and Survival rely on change
- Reengineer Capabilities to better deliver better products while reducing costs
 - Not just automate for “better sameness”
 - E.g. “self service” channels should displace “in person” over time
 - “Reengineering Work: Don’t Automate, Obliterate”⁵

⁵ <https://hbr.org/1990/07/reengineering-work-dont-automate-obliterate>

- Proactively manage business continuity as a critical risk

C1. Applications

- Bias to proven, best of breed solutions
 - Use packaged solutions where possible
 - Avoid getting stranded by [excessive] customization and diverging from the baseline
- Recognize the trade off between integrated applications and best of breed point solutions
 - Integrates application usually includes second or third class answers in specific areas
 - Point solutions may require custom integrations
 - Allow marketplace players to integrate wherever possible
 - The trade off is often between custom development and custom integration

C2. Data

- Coordinate data to ensure timely consistency and accuracy
 - Inconsistent data drives inconsistent performance
 - Reduce redundancy and duplication wherever practical

D. Technology

- Position as early majority, main street on the Technology adoption curve
 - Benchmark wherever possible
 - Only be an early adopter with a compelling case, opportunity
 - Being a Laggard generates frustration and misses proven opportunities
- Address Life-Cycle issues, not just initial technology adoption
 - Products and services require governance mechanisms, service organizations, backup, recovery,

E. Opportunities and Solutions

- Develop a considered As-is, Can be, Should be integrated approach
 - i.e. “Should be” is directional, but not part of a plan
 - Not just provide a list to be cherry picked

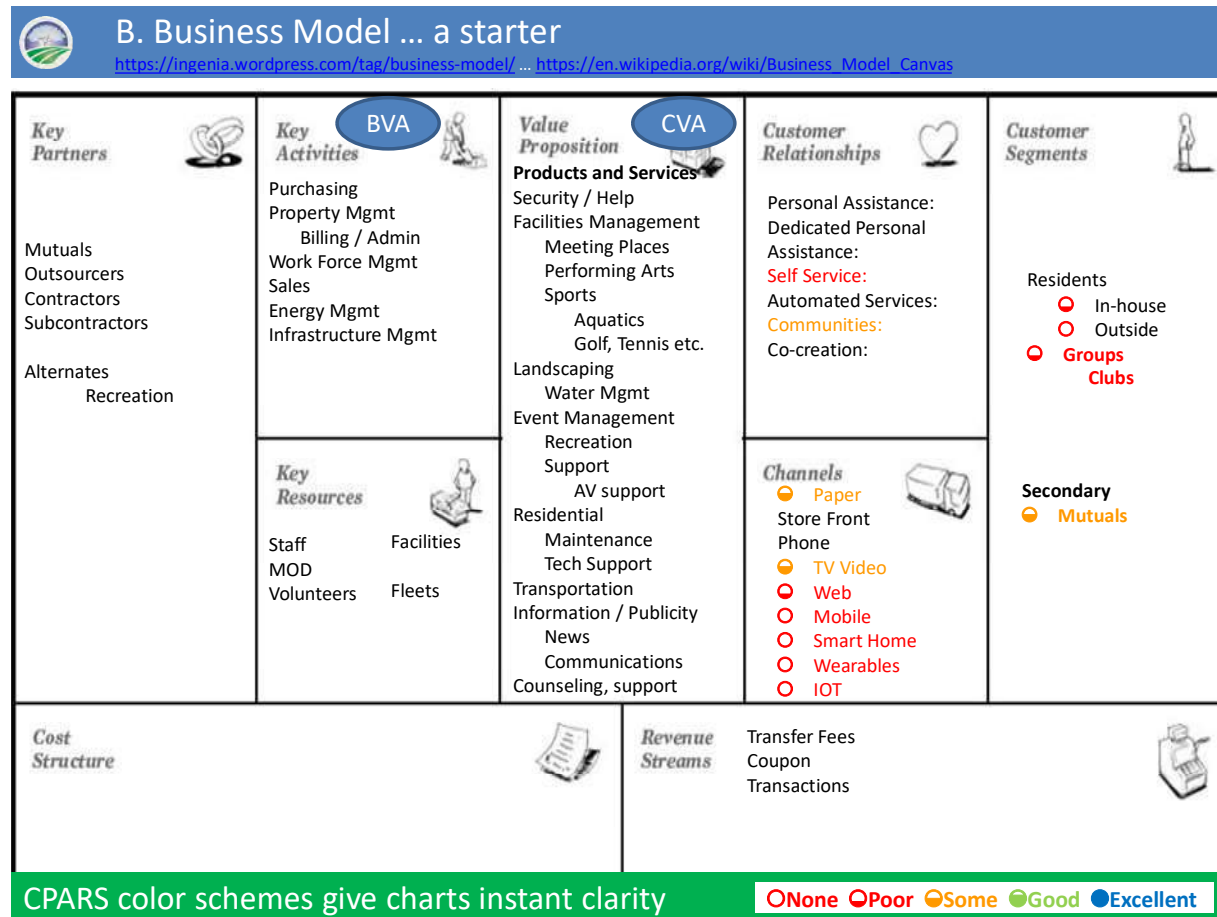
F. Migration Planning

- Make an informed trade-off between desires and needs
 - Some needs may not appear attractive but are pre-requisites to desires
 - ROI is appealing, but very difficult for new products and infrastructure

B. Business Architecture

The business model describes the Operations of GRF, its relationships to customers and therefore the areas where Technology can contribute.

Note: this should be continuously improved during the process

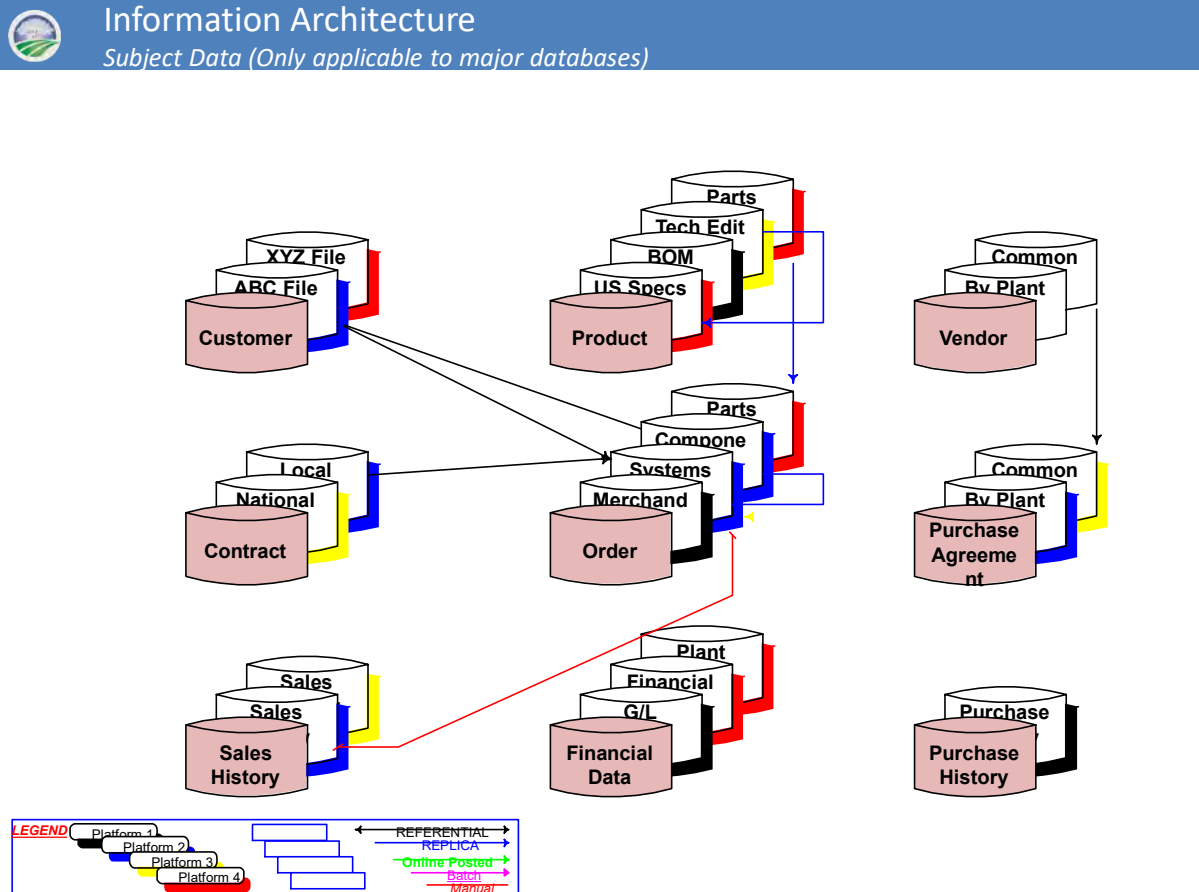




C1. Applications Architecture

C2. Data Architecture

Major Subject Areas and existing databases. This identifies duplicate data (which drives inconsistency and inaccuracy); it can also illustrate how data is partitioned, synchronized and coordinated.



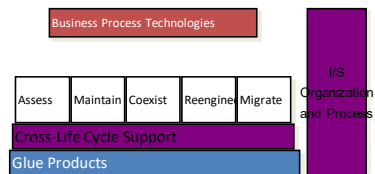
D. Technical (Platform) Architecture

Describes the supporting technologies, developing and enabling tools



Technical Infrastructure Blueprints

Development Tools



Platform Environment

Applications Enablers Office Automation (WP, SS, FAX, Graphics) Database/ DBMS Transaction Processing Monitor (e.g. CICS) Workflow Management Document Management	Communications Network & Communications Communications Management Communications Electronic Mail Middleware Application specific Terminal emulation
Hardware/ Systems Software Operating Systems Scheduling Security Computer Performance Measurement	Operational Tools Operations Automation Tape Management DASD/ Storage Management Configuration Management

E1. Basis for Interest (BFI) Template

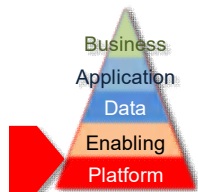
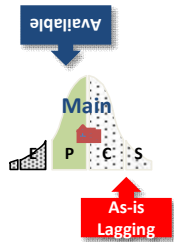
The Project Interest Definition Document:

This document is a template for assessing Project interest and includes:

1. Problem/Opportunity
2. Solution Concept
3. Basis for Success
4. Beneficiaries/Target Audience
5. Critical Success Factors
6. Economics
7. Dependencies & Infrastructure requirements
8. Benchmarks
9. Implementation Approach

E. Opportunity: Basis For Interest Template

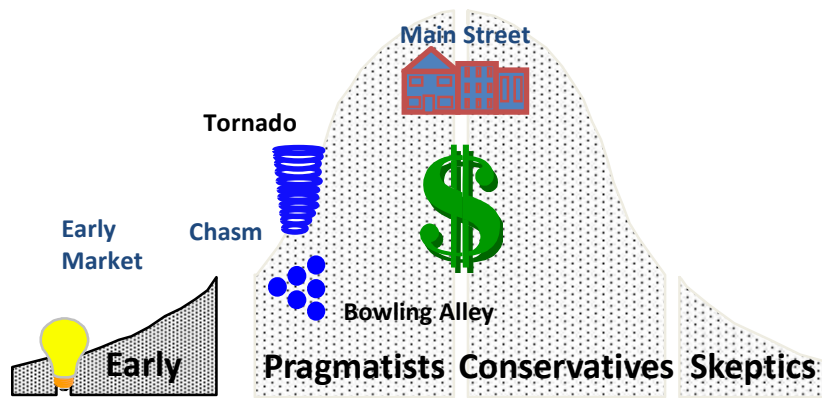
“Pithy marketing description tag line”



Problem/Opportunity <ul style="list-style-type: none"> Customer <u>problem/opportunity</u> the solution addresses Most likely <u>causes</u> How the solution will <u>address</u> the issue 	Solution Concept <ul style="list-style-type: none"> <u>Definition</u> and description of the solution Value proposition and implicit promise to the customer (end-user) <u>Features and benefits</u> <u>Enabling technology</u>
Basis for Success (competences, assets) <ul style="list-style-type: none"> <u>Fit</u> with core competencies/ experience base <u>Uniqueness</u>/ differentiation of the solution <u>Sustainability</u> of the solution 	Target Audience <ul style="list-style-type: none"> <u>Industry/ industries</u> this solution addresses; <u>Market segment(s)</u> and estimated size Customer <u>selection criteria</u> <u>Specific</u> existing and potential <u>customers</u> and functions affected <u>Likely Adoption demographics</u>
Critical Success Factors <ul style="list-style-type: none"> <u>Imperatives</u> that must be accomplished <u>Barriers</u> that must be overcome <ul style="list-style-type: none"> Business System Diamond Gaps <u>Competitor's</u> offerings and likely response 	Economics <ul style="list-style-type: none"> Customer: Attractiveness of the economics Provider (e.g. GRF) Attractiveness of the economics
Dependencies <ul style="list-style-type: none"> Supporting initiatives or programs that must be done to achieve 	Implementation Approach and Projects <ul style="list-style-type: none"> <u>Approach</u> used to deliver the solution Phases or projects to deliver
Benchmarks <ul style="list-style-type: none"> Existing <u>actual examples</u> or <u>possible comparisons</u> 	

Technology Adoption Curve

Crossing the Chasm, Geoffrey Moore



E2 .Project Definition Document (PDP)

The Project Definition Document includes Title, Purpose, Goal/Benefits, Objectives, Scope, Exclusions, Deliverables. If a Project is of value to GRF, there is need to evaluate essential customer Requirements or business benefit to be achieved, dependencies, and constraints/barriers which clarify relationships with other projects and processes. Clarifying assumptions, risks, uncertainties is critical to project definition.

If a specific Project is under consideration, the budget for acquisition or migration, conversion, transition, implementation, and maintenance cost projections are essential for approval by the GRF Finance Committee and Board of Directors. Desired Outcomes/Success Criteria must be evaluated. A cost-savings model for each project is of benefit since some projects may be best outsourced, or if a core competency for GRF staff, operational budget cost-savings.

Include the Document document from Make a Great Project .co.uk

Feature Benefit Charts

Features vs. Benefits

Examples: "Which Means to You"

Feature	Benefit
"Been in business for 23 years"	Service provider longevity/POM
"Low E glass"	Mirror for heat/Sunscreen
"Constant Force Balance System"	8000 cycles = >20 years longevity
"Fusion Welded Frames and Sashes"	Durability, energy savings
"Argon Gas"	Swimming pool
"Warranty"	Durability, longevity, POM



EVALUATING SOLUTIONS TO IDENTIFIED PROBLEM IN A BUSINESS PROCESS
 HOW TO EVALUATE POSSIBLE TECHNOLOGIES AS SOLUTIONS
 WHAT ARE THE COMPONENTS OF A PROJECT?

PRIORITY LEVEL	PROBLEM to SOLVE	PRICING MODEL	PLATFORM	PRODUCT
Immediate Near-term Long-term	Communication Commerce Core GRF Competency	Enterprise license Seat license Transactional model In/Outsource	Dependencies on infrastructure requirements	Proof of concept Beta development Generally available Industry standard Sun-setting
PEOPLE IMPACT	PROCESS IMPACT	POTENTIAL ROI	PERFORMANCE	PITFALLS
GRF Human resource GRF in-house skills GRF recruit skills GRF Training	Integration issue? End-User access? Continuity of GRF business process	Cost of acquisition, Manage/maintain, Operational cost- saving of In/Outsource	Measure process improvement Measure product reliability Measure customer satisfaction	Lost opportunity costs-risk of not implementing Security risks Vendor v. Partner

GRF Board direction of strategic business direction will be valuable in terms of defining:

Core GRF Competencies: Is this business process a core competency?

If a business process is a GRF core competency, does GRF want to outsource it? If not, should we outsource it?

Is GRF managing IT strategically? What does that mean? Will GRF partner with suppliers/vendors/contractors/consultants/entrepreneurs?