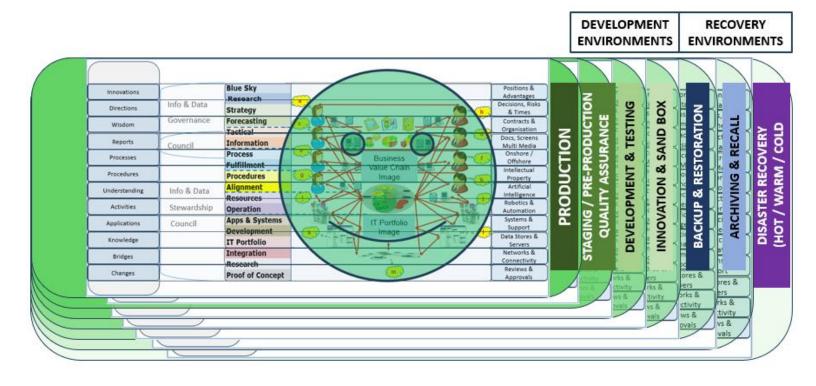
DEVELOPMENT



General Definitions of DEVELOPMENT:

https://www.oxfordlearnersdictionaries.com/definition/english/development?q=development

the process of producing or creating something new or more advanced; a new or advanced product or idea

General Definition of Maintenance:

https://www.oxfordlearnersdictionaries.com/definition/english/maintenance?q=maintenance

the act of keeping something in good condition by checking or repairing it regularly

Development Activity

(DAMA Dictionary of Data management 2nd Edition, DAMA International, Page 102)
In the DAMA-DMBOK Functional Framework, an activity undertaken with projects and recognized as part of the Systems Development LifeCycle, creating data deliverables through analysis, design, building, testing, and deployment. SEE ALSO activity group.

Systems Development LifeCycle (SDLC)

(DAMA Dictionary of Data management 2nd Edition, DAMA International, Page 233)

The phases and activities common to software development projects Common phases include: Initiation, Concept Development, Planning, Requirements Analysis, Design, Development, Integration and Testing, Implementation, Operations and Maintenance and Disposition.

Why are collections of artefacts into portfolios necessary

In reality, human beings have been created as creative beings, designed to develop and maintain our surroundings, but we need to renew our minds from where they are now, locked into a system of education, step out of this cage of data and look at the reality of who we are, and what our original mission was. (of course, in the back of our minds we remember that man's fall brought about a curse on this earth, and the only way to be saved from the destruction of earth, is to have your soul moved to a new spirit, which only Jesus Christ can give those who will, recognise the high price God paid to save them, apologise, choose to obey His commands themselves, and forgive all). But let's return to our original design first.

To understand our design, we need to understand how we fit into God's design:

Genesis 1:1 to 2:3

In the beginning God

[Please note that the original text has an unknown word, that is not translated in the available Bibles, in this position, after the word "God" in this first sentence in the Bible. The word is made up of 2 letters: the first and last letter of the alphabet. In Greek this is translated as "Alpha and Omega", which Jesus Christ calls Himself in the book of Revelation]

created the heaven and the earth.

And the earth was without form, and void; and darkness upon the face of the deep. And the Spirit of God moved upon the face of the waters.

And God said, Let there be light: and there was light. And God saw the light, that good: and God divided the light from the darkness. And God called the light Day,

[ancient Hebrew "Light" & "Day" means "Order"]

and the darkness he called Night.

[ancient Hebrew "Darkness" & "Night" means "Chaos"]

And the evening and the morning were the first day.

And God said, Let there be a firmament in the midst of the waters, and let it divide the waters from the waters. And God made the firmament, and divided the waters which under the firmament from the waters which above the firmament: and it was so. And God called the firmament Heaven.

[There are seven definitions in the Bible for the English word Heaven, this one refers to the word "sky"]

And the evening and the morning were the second day.

And God said, Let the waters under the heaven be gathered together unto one place, and let the dry appear: and it was so. And God called the dry Earth; and the gathering together of the waters called he Seas: and God saw that good.

And God said, Let the earth bring forth grass, the herb yielding seed, the fruit tree yielding fruit after his kind, whose seed in itself, upon the earth: and it was so. And the earth brought forth grass, herb yielding seed after his kind, and the tree yielding fruit, whose seed in itself, after his kind: and God saw that good.

And the evening and the morning were the third day.

And God said, Let there be lights in the firmament of the heaven to divide the day from the night; and let them be for signs, and for seasons, and for days, and years: And let them be for lights in the firmament of the heaven to give light upon the earth: and it was so. And God made two great lights; the greater light to rule the <u>day</u>, and the lesser light to rule the <u>night</u>: the stars also. And God set them in the firmament of the heaven to give light upon the earth, And to rule over the day and over the night, and to divide the light from the darkness: and God saw that good.

And the evening and the morning were the fourth day.

And God said, Let the waters bring forth abundantly the moving creature that hath life, and fowl may fly above the earth in the open firmament of heaven. And God created great whales, and every living creature that moveth, which the waters brought forth abundantly, after their kind, and every winged fowl after his kind: and God saw that good. And God <u>blessed them</u>, saying, Be fruitful, and multiply, and fill the waters in the seas, and let fowl multiply in the earth.

And the evening and the morning were the fifth day.

And God said, Let the earth bring forth the living creature after his kind, cattle, and creeping thing, and beast of the earth after his kind: and it was so. And God made the beast of the earth after his kind, and cattle

[ancient Hebrew "cattle" means all types of animals, not just cows]

after their kind, and every thing that creepeth upon the earth after his kind: and God saw that good.

And God said, Let us make man in our image, after our likeness: and <u>let them have dominion over the fish of the sea</u>, and over the fowl of the air, and over the cattle, and over all the earth, and over every <u>creeping thing that creepeth upon the earth</u>. So God created man in his image, in the image of God created he him; male and female created he them.

And <u>God blessed them</u>, and God said unto them, Be fruitful, and multiply, and replenish the earth, and subdue it: and have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth.

And God said, Behold, I have given you every herb bearing seed, which upon the face of all the earth, and every tree, in the which the fruit of a tree yielding seed; to you it shall be for meat. And to every beast of the earth, and to every fowl of the air, and to every thing that creepeth upon the earth, wherein life, every green herb for meat: and it was so.

And God saw every thing that he had made, and, behold, very good. And the evening and the morning were the sixth day.

Thus the heavens and the earth were finished, and all the host of them.

And on the seventh day God ended his work which he had made; and he rested on the seventh day from all his work which he had made. And God <u>blessed</u> the seventh day, <u>and sanctified</u> it: because that in it he had rested from all his work which God created and made.

So The context that we need to understand the concept of Development is the same as what we see God Himself made all things, and the context of ourselves is that we had both a purpose, and a responsibility that was given to us by God. let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth. satan can only do what he does if he can do it through us humans, because only we have the dominion and authority. Yes we were influenced to mess this all up, but this authority, and our creative nature is still built into us. It is for each of us to decide how we will be used/abused, and allow "the others" to use us like tools in their tool-boxes.

Now we need to understand the Context of how God created mankind in more detail.

Genesis 2: 4-25

These the generations of the heavens and of the earth when they were created, in the day that the LORD God made the earth and the heavens, And every plant of the field before it was in the earth, and every herb of the field before it grew: for the LORD God had not caused it to rain upon the earth, and not a man to till the ground.

But there went up a mist from the earth, and watered the whole face of the ground. And the LORD God formed man, the dust of the ground, and breathed into his nostrils the breath of life; and man became a living soul.

And the LORD God planted a garden eastward in Eden; and there he put the man whom he had formed.

And out of the ground made the LORD God to grow every tree that is pleasant to the sight, and good for food; the tree of life also in the midst of the garden, and the tree of knowledge of good and evil.

And a river went out of Eden to water the garden; and from thence it was parted, and became into four heads. The name of the first, Pison: that it which compasseth the whole land of Havilah, where, gold; And the gold of that land, good: there, bdellium and the onyx stone. And the name of the second river, Gihon: the same it that compasseth the whole land of Ethiopia. And the name of the third river Hiddekel: that it which goeth toward the east of Assyria. And the fourth river, Euphrates.

And the LORD God took the man, and put him into the garden of Eden to dress it and to keep it.

And the LORD God commanded the man, saying, Of every tree of the garden thou mayest freely eat: But of the tree of the knowledge of good and evil, thou shalt not eat of it: for in the day that thou eatest thereof thou shalt surely die.

And the LORD God said, not good that the man should be alone; I will make him an help meet for him.

And out of the ground the LORD God formed every beast of the field, and every fowl of the air; and brought unto Adam to see what he would call them: and whatsoever Adam called every living creature, that the name thereof. And Adam gave names to all cattle, and to the fowl of the air, and to every beast of the field; but for Adam there was not found an help meet for him.

And the LORD God caused a deep sleep to fall upon Adam, and he slept: and he took one of his ribs,

[the correct translation for "rib" is "a part of" – we do not know what Adam looked like before this part was taken out of him, but he can only be "whole in flesh", as he originally was, once reunited with his other (must be female) half, in Godly marriage, and only God can bring that other half to you – do not make your own choices]

and closed up the flesh instead thereof; And the rib, which the LORD God had taken from man, made he a woman, and brought her unto the man. And Adam said, This now bone of my bones, and flesh of my flesh: she shall be called Woman, because she was taken out of Man. Therefore shall a man leave his father and his mother, and shall cleave unto his wife: and they shall be one flesh. And they were both naked, the man and his wife, and were not ashamed.

So we can see that anything we choose to authorise in this earth can come to pass, and therein lies a great danger, that we would authorise or be a part of creating something that is not Godly. We see how we were influenced in ancient times, when we still had our single language, (which may have been telepathic abilities – just a guess).

The context to this next understanding is as follows:

Chapter 6: The Rise of and corruption by the Fallen Angels, and their hybrid race, the Nephilim, and how they influenced mankind, and then ran out of food and began eating mankind.

Chapter 7: God's solution to wipe them out and start again using the Global Flood, saw Noah given a 100 year Project, a design, and on his own, with God's guidance, developed the Ark, collected all the animals (not affected by Nephilim redesign).

Chapter 8-10 The replenishment of the Earth took place around where the Ark rested on Mount Ararat, and then the Nephilim who had returned, and were influencing mankind again, with the Nephilim wanting to develop a mechanism to escape the prison of earth they now found themselves in, but God had already decreed that none of them were going to leave this planet, but its fate, and theirs would both be a fiery and eternal end. The demonic realm lives in terror of that day of judgement. Their influenced human followers are oblivious to its reality.

Genesis 11:1-9

And the whole earth was of one language, and of one speech. And it came to pass, as they journeyed from the east, that they found a plain in the land of Shinar; and they dwelt there.

And they said one to another, Go to, let us make brick, and burn them throughly. And they had brick for stone, and slime had they for morter. And they said, Go to, let us build us a city and a tower, whose top unto heaven; and let us make us a name, lest we be scattered abroad upon the face of the whole earth.

And the LORD came down to see the city and the tower, which the children of men builded. And the LORD said, Behold, the people one, and they have all one language; and this they begin to do: and now nothing will be restrained from them, which they have imagined to do. Go to, let us go down, and there confound their language, that they may not understand one another's speech.

So the LORD scattered them abroad from thence upon the face of all the earth: and they left off to build the city. Therefore is the name of it called Babel; because the LORD did there confound the language of all the earth: and from thence did the LORD scatter them abroad upon the face of all the earth.

Why was this whole preamble necessary?

Because unless you understand your design, your authority, that there are influencers who desire to use your authority and capabilities, you will keep running into the same problem as what has just been described in chapter 11 of Genesis.

There are literally trillions of opportunities for miscommunication, misunderstanding, over-engineering, underengineering, insufficient foresight and planning, hidden agendas, coming company rationalisations and restructures, and a plethora of other influences which can cause the Development work that you want to produce, to fail.

Consider for a moment all of what we have discussed to date in the previous Information Value Chain segments, and think about the risks, issues, now, hidden, and over time, and consider that these are but a small amount of what is really happening through other influences. The complexity of all of this, and keeping this whole "House of cards" balanced and aligned, is a virtual impossibility, unless God is sustaining and guiding each person correctly, and each person is actually listening and doing as He instructs. In today's world this seems impossible.

However, from first-hand experience, I can tell you, that if that which is being worked on will serve God's purposes, and if you have given God the area, that you have been given influence and authority over, (remember, God has decreed that you have dominion over all the Earth, this includes any work you are given to do), and that you take your orders from God on that which you have the authority, by way of your position, to do, then supernaturally, whatever you are developing will align, and flow, and its timing will succeed (not according to man's project plans – man is happy to do something twice, rather than first time right). Why is this?

You see, All discussions to this point have been considered in what can be understood to be the top floor of a three (or more) story building, where this top floor is known as the PRODUCTION Environment. But in reality, there are other environments, which are physically detached from one another, but must logically flow together through the Development phases of the Systems Development LifeCycle.

In order of lesser stringent controls and greater opportunities for failures, mistakes, and churn in redevelopment due to the insufficiency of an environment's data to deliver successful results in preparation for promotion to the next "floor" in the Building, the Development Environments are:

- 1. STAGING / PRE-PRODUCTION QUALITY ASSURANCE
- 2. DEVELOPMENT & TESTING
- 3. INNOVATION & SAND BOX

There are at least another three "floors" (in the "Basement" if you like) which constitute ensuring the continuity of everything you are doing. These are:

- 1. BACKUP & RESTORATION
- 2. ARCHIVING & RECALL
- 3. DISASTER RECOVERY SITES (HOT / WARM / COLD)

If you consider that God knows where every bit of data is and was, where every bit of code is, what it was meant for, when it was first written, who then changed the code and how. How over time, the code became enmeshed into "spaghetti code", and how, during this time-line, different data values were laid down like layers of "sedimentary rock" in the various databases, which themselves have been, changed, enhanced, merged with other data sets though repurposing, rationalisation, or accommodating the avalanche of on-boarded data through mergers and acquisitions, which are like a flowing river of data through the Production Systems, which, by necessity, requires the production data to be (after obfuscation of Personal and other sensitive information) passed down to the lower environments, often from old backups to create a time-gap to hide intellectual property, and product releases being worked on, as just some examples of considerations.

There are also considerations around onshore/offshore legal right to see certain data, which can also limit contracting, directly, or indirectly, with countries that do not have compliance with legal limitations. This can affect Platform Support decision making, and especially where access to the latest Production data is necessary to do proper testing for systems, integration and Reporting for End-User Acceptance.

Testing

The basic types of testing of Development are:

- 1. Test that what you have built does what it has been envisaged to do, and the functional requirements received have been met.
- 2. Test that the part built as part of the Application or System it is to be a part of is correct, and ensure that all the Non-Functional Requirements will be met.
- 3. Test that the Application or System works correctly with its wider relationships of modules, integration, data bases, data warehouses, data lakes, data lake-houses, platforms, presentation methods and tools, and
- 4. Test that the End-Users approve of the final piece of work, and that all Requirements have been met.
- 5. Usually there is a period of "After Care" provided where there is no charge if there are minor errors, or if the change needs to be rolled back due to critical unforeseen errors.

Change Control between Environments

The different environments have increasing levels of complexity to be dealt with, and each have an ecosystem of many things relating to many others, which need to be maintained, with, at a minimum, the Pre-Production Environment having a replication of all the application and system Integration to ensure effective Data-Flow, and no disruption to the Production Environment when the change is introduced into it.

Changes need to be introduced in concert with all of the systems in the Data Lineage having approved changes presented as an orchestrated campaign to ensure that the full data lineage, is addressed, and the data-flow is harmonious, and that the change in the "sendimentary rock" layers of data being laid down will not negatively affect existing queries in any other part of other related applications and systems making use of the new/changed data now coming through.

Special care needs to be taken in this case where someone determines a data field is no longer required by themselves, or that data fields should be merged. Changing the underlying layers of data laid down in systems and data stores can have serious negative impact on reporting and actions taken by other systems, or people.

Definitions and Terminology

A significant issue arises, or is embedded, to later cause confusion, when terminology is changed due to changing requirements, and data fields no longer hold just the data they were originally designed to hold, and thus upstream and downstream begin to have failures in their results, often not perceptible immediately, thus skewing the reality of the work being done, until it is called out, when the issues are so embedded, undoing the problem is no longer cost effective, and everyone has to twist themselves out of shape to accommodate the abnormalities that have been unwittingly introduced.

You really do want God to help you to catch these when they are about to arise, but if there is a lack of concern, or hidden agendas, God will not get involved for those who are deceptive or devious, but can show you how to do what is right, in the right way with that which God places in your care, and which you then give to Him, and ask Him for guidance on.

So what is God going to be doing to all those who choose to not submit to Him, nor honour Him with what they do, nor do what is right in the Development that they do perform. God will be their enemy, and remember, He is at every level of understanding, across all time, and all Environments, and can allow confusion to be introduced with just one incorrect comma, special character, letter, word of either code or data, or anything else. God understands every single Development language, every single technical system, every single type of data transfer right down to the frequencies in radio or microwave or light, or the data transfers of electricity, and when what will get too hot and create failures, or when enemies will hack, and where, or data centers will be destroyed. Nothing can escape God, but working with Him, His way, can provide all that is right. But most will reject Jesus Christ working on what they are doing, and for these, they have the following to look forward to.

Isaiah 5: 5-25

And now go to; I will tell you what I will do to my vineyard: I will take away the hedge thereof, and it shall be eaten up; break down the wall thereof, and it shall be trodden down: And I will lay it waste: it shall not be pruned, nor digged; but there shall come up briers and thorns: I will also command the clouds that they rain no rain upon it. For the vineyard of the LORD of hosts, the house of Israel, and the men of Judah his pleasant plant: and he looked for judgment, but behold oppression; for righteousness, but behold a cry.

Woe unto them that join house to house, lay field to field, till no place, that they may be placed alone in the midst of the earth!

In mine ears, the LORD of hosts, Of a truth many houses shall be desolate, great and fair, without inhabitant. Yea, ten acres of vineyard shall yield one bath, and the seed of an homer shall yield an ephah. Woe unto them that rise up early in the morning, they may follow strong drink; that continue until night, wine inflame them!

And the harp, and the viol, the tabret, and pipe, and wine, are in their feasts: but they regard not the work of the LORD, neither consider the operation of his hands. Therefore my people are gone into captivity, because no knowledge: and their honourable men, famished, and their multitude dried up with thirst.

Therefore hell hath enlarged herself, and opened her mouth without measure: and their glory, and their multitude, and their pomp, and he that rejoiceth, shall descend into it. And the mean man shall be brought down, and the mighty man shall be humbled, and the eyes of the lofty shall be humbled: But the LORD of hosts shall be exalted in judgment, and God that is holy shall be sanctified in righteousness. Then shall the lambs feed after their manner, and the waste places of the fat ones shall strangers eat.

Woe unto them that draw iniquity with cords of vanity, and sin as it were with a cart rope: That say, Let him make speed, hasten his work, that we may see: and let the counsel of the Holy One of Israel draw nigh and come, that we may know

Woe unto them that call evil good, and good evil; that put darkness for light, and light for darkness; that put bitter for sweet, and sweet for bitter!

Woe unto wise in their own eyes, and prudent in their own sight!

Woe unto mighty to drink wine, and men of strength to mingle strong drink: Which justify the wicked for reward, and take away the righteousness of the righteous from him!

Therefore as the fire devoureth the stubble, and the flame consumeth the chaff, their root shall be as rottenness, and their blossom shall go up as dust: because they have cast away the law of the LORD of hosts, and despised the word of the Holy One of Israel. Therefore is the anger of the LORD kindled against his people, and he hath stretched forth his hand against them, and hath smitten them: and the hills did tremble, and their carcases torn in the midst of the streets. For all this his anger is not turned away, but his hand stretched out still.

The question is, do you want to be a part of the above, or will you ask God what you can do, and where you can do things His way, such that you can give it all to Him.

Watch this video (quite humorous) to understand how you give something to God, and work effectively, His way, with Him.

The Pineapple Story. (Missionary's Testimony on overcoming in life (Youtube Link Only)

https://youtu.be/Nt23gnwjdsU

Enjoy Jesus Christ while you perform Development Work.