MOLECULAR CONTENT

Robert Gillespie
CIDM: New Mexico
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NOTICE:

FOR THE PURPOSES OF THIS PRESENTATION, THE VIEWS EXPRESSED ARE PERSONAL AND NOT NECESSARILY THOSE OF NOKIA.

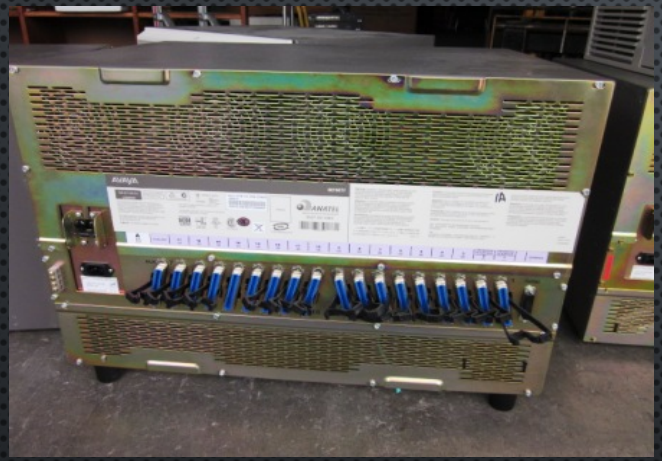
TELCO- THE BACKGROUND

Evolution: pre history

- Point-to-point
- Closed
- Monopoly/cartels
- Labor intensive

TELCO- THE BACKGROUND

Evolution: the classical period



- Proprietary hardware
- Closed protocols
- Closed interfaces
- Heavy manual configuration
- Small number of vendors

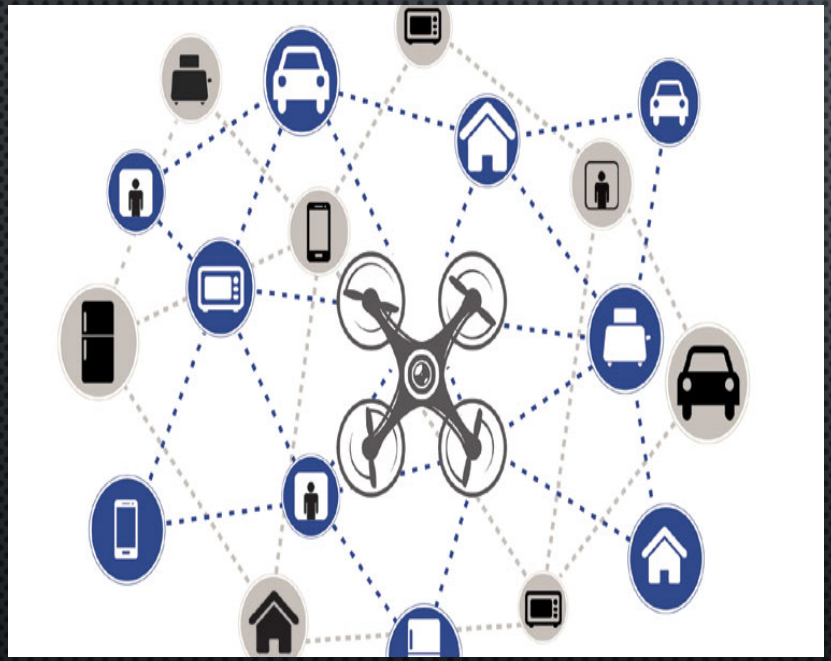
- Battery life (almost for ever)
- Operator restrictions
- Limited (if any) data services
- High cost services

EVOLUTION: THE PRESENT

- Virtualization
- Move to cloud
- Agnosticism (ish)
- Interoperability
- Open protocols and all-IP
- Open Interfaces
- New players

- Improved communication: beyond voice
- Connections all-most everywhere
- Multiple access types (beyond Radio)
- Virtual Reality
- Data-centric (bit-pipe)

EVOLUTION: THE VERY NEAR FUTURE



- Openness
- Telco assimilates the internet, or…….
- Automated service delivery and deployment
- Automated operations
- Integration of big data and intelligent operations
- Everything talks to everything
- Your fridge does your shopping
- Always-on connectivity
- Single service delivery framework for all access types

AND SO?

- Application layer: from products to microservices
- From boxes to solutions to everything as a Service (XaaS)
- IT-ification of the Telco cloud
- From releases to continuous delivery to DevOps

THE RESPONSE

Integration of content creation into delivery pipeline(s)

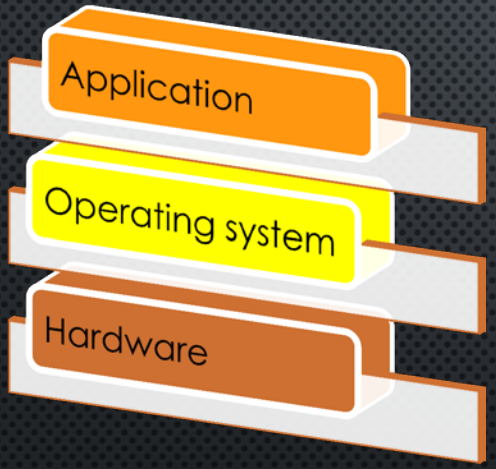
Automation of task allocation, creation process, reporting, delivery.

Enabling content triage and healing.

Open formats, open processes, open collateral

BUT FIRST: MOLECULAR ORGANIZATION

Content defined by Cloud productization



Product A

Abstraction and Virtualization

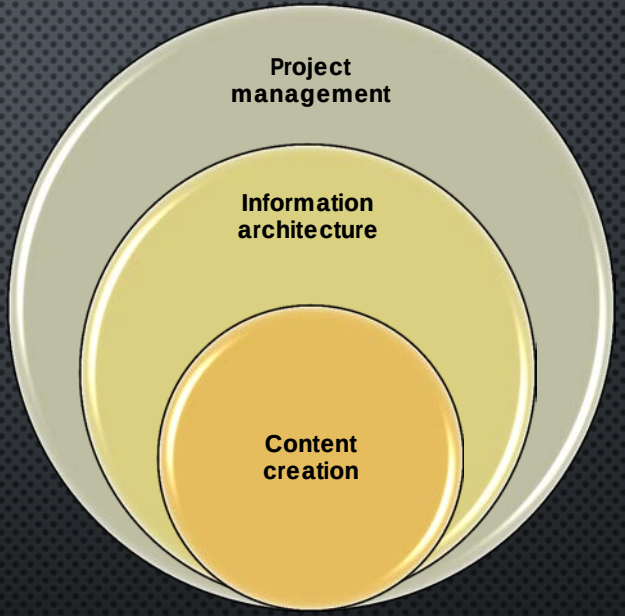
Application

Abstraction

Management

Infrastructure

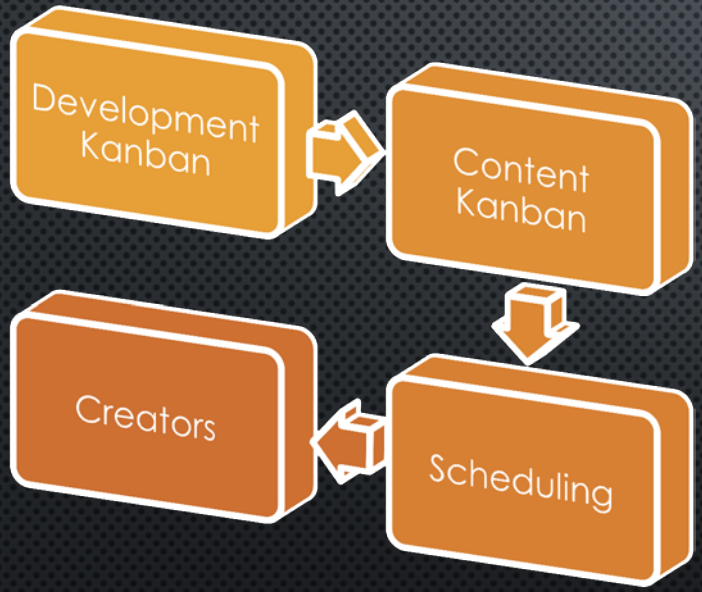
VIRTUALIZING CONTENT CREATION RESOURCES



Tools
- **Integrated**
- automated

Organization
- **Dynamic**
- Not product defined

SCHEDULING CREATION OVER MOLECULAR RESOURCES



- Development items are ported to the content Kanban with priority and requirement information
- Content Kanban sub-items are created if required to link together decomposed content
- Scheduling is based on priority and any requirements such as knowledge or location
- Kanban items can be allocated to any available resource, irrespective of product or team designation that meet the requirements

SHARE THE PIPELINE(S)

Common content and feature definition

Optimized resource allocation

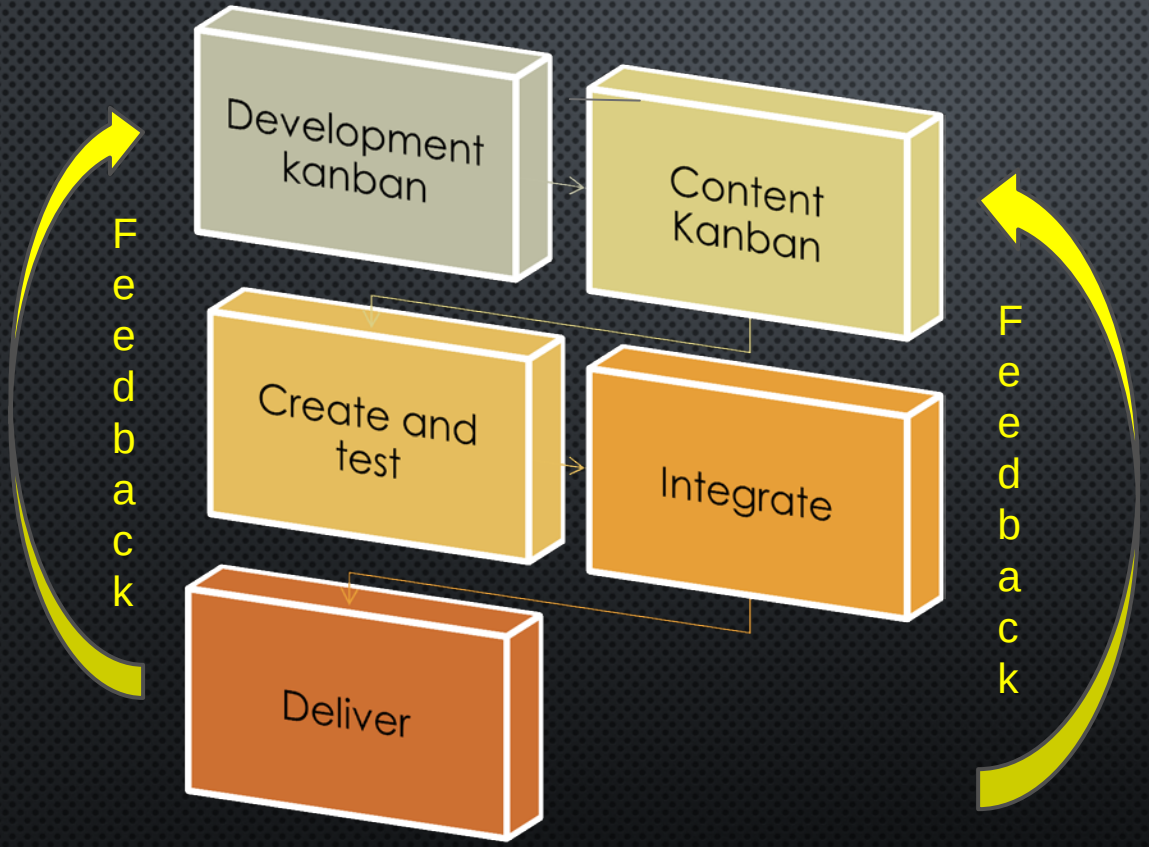
Open creation and review tools

Automated testing

Common compilation

Common publishing

INTEGRATION AND ALLOCATION



Content is specified by development.

In Agile mode, with continual integration, delivery and deployment, a flow of content in short time line increments, requires:

- Common triggering
- Common staging
- Automated testing
- Common review

TIMING IS EVERYTHING: COORDINATED DELIVERY

Start → Deployment → Year 5

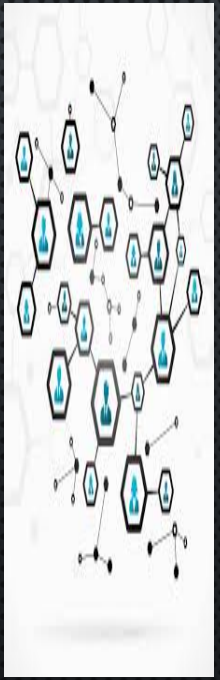
Function 1: Component 1 → Component 2 → Component n

Function 2: Component 1 → Component 2 → Component n

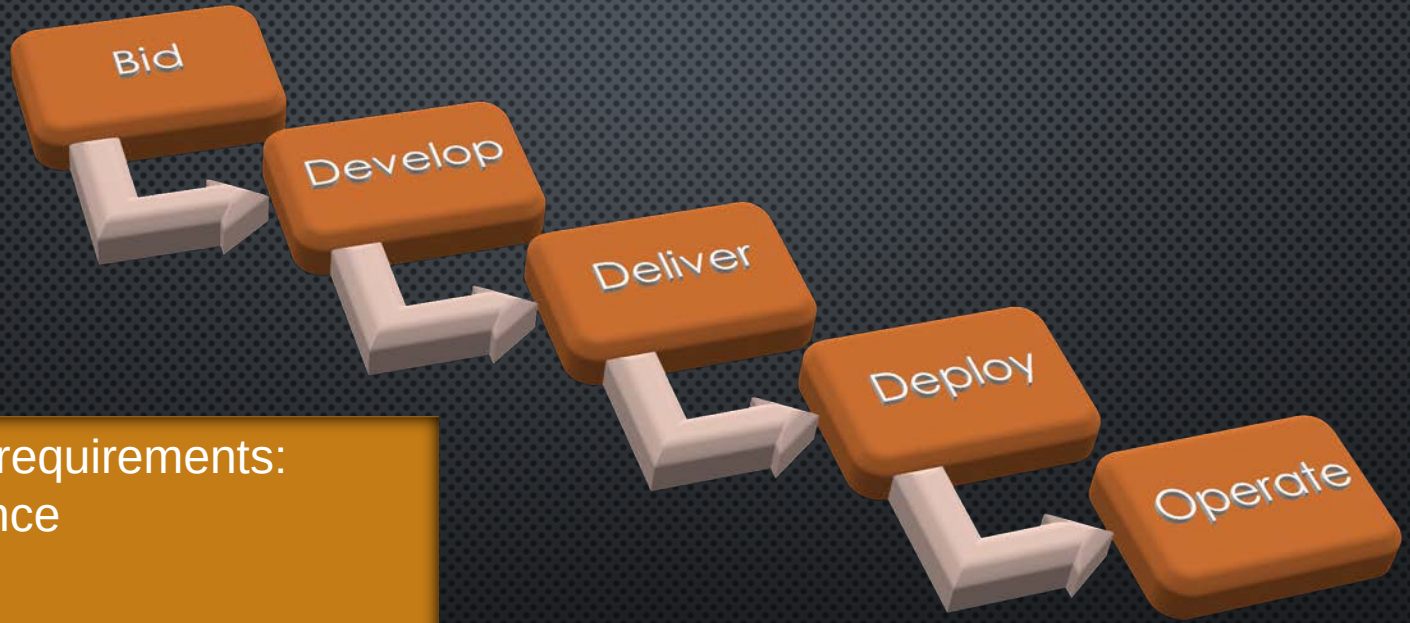
Function 3: Component 1 → Component 2 → Component n

Interworking microservice

Interworking microservice



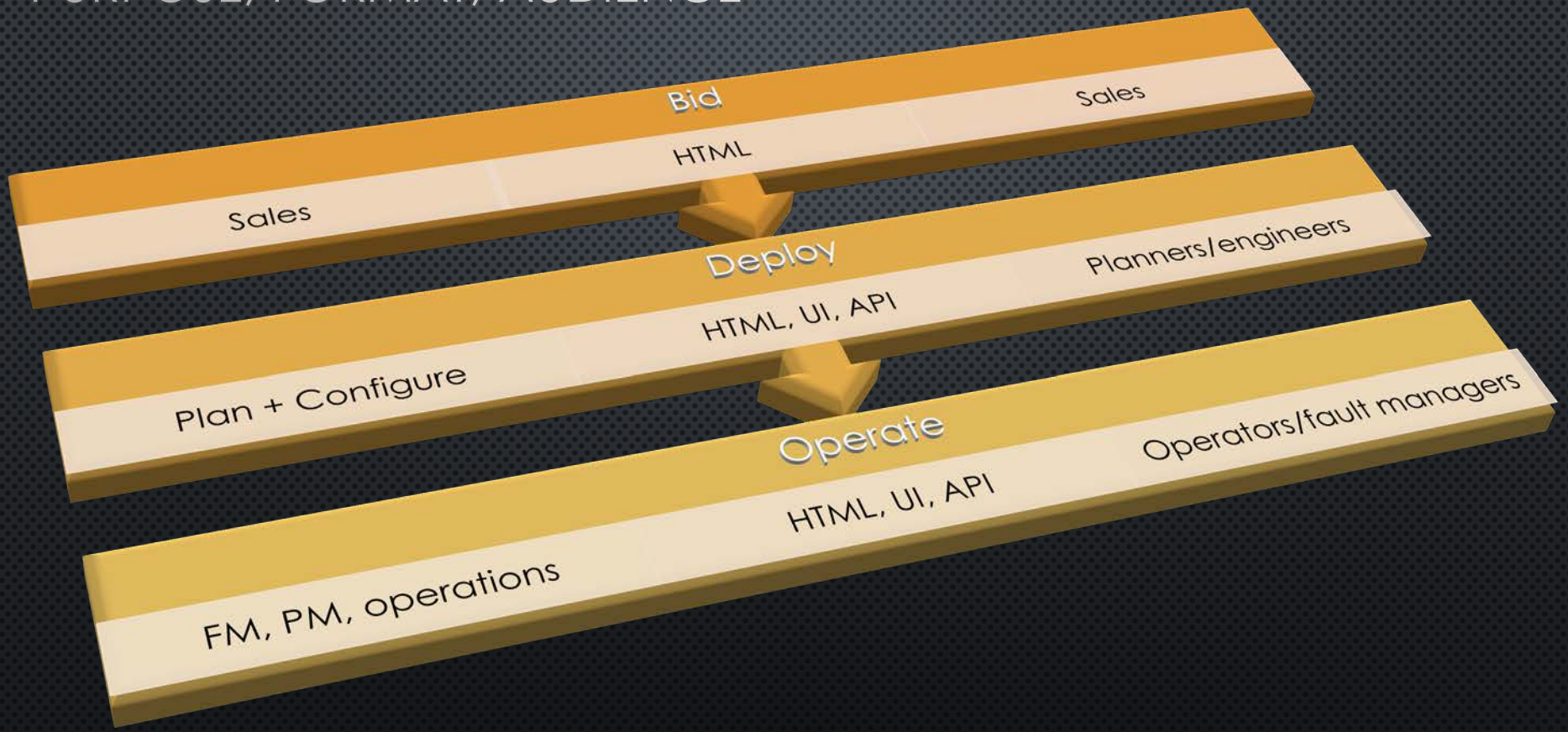
INTEGRATION



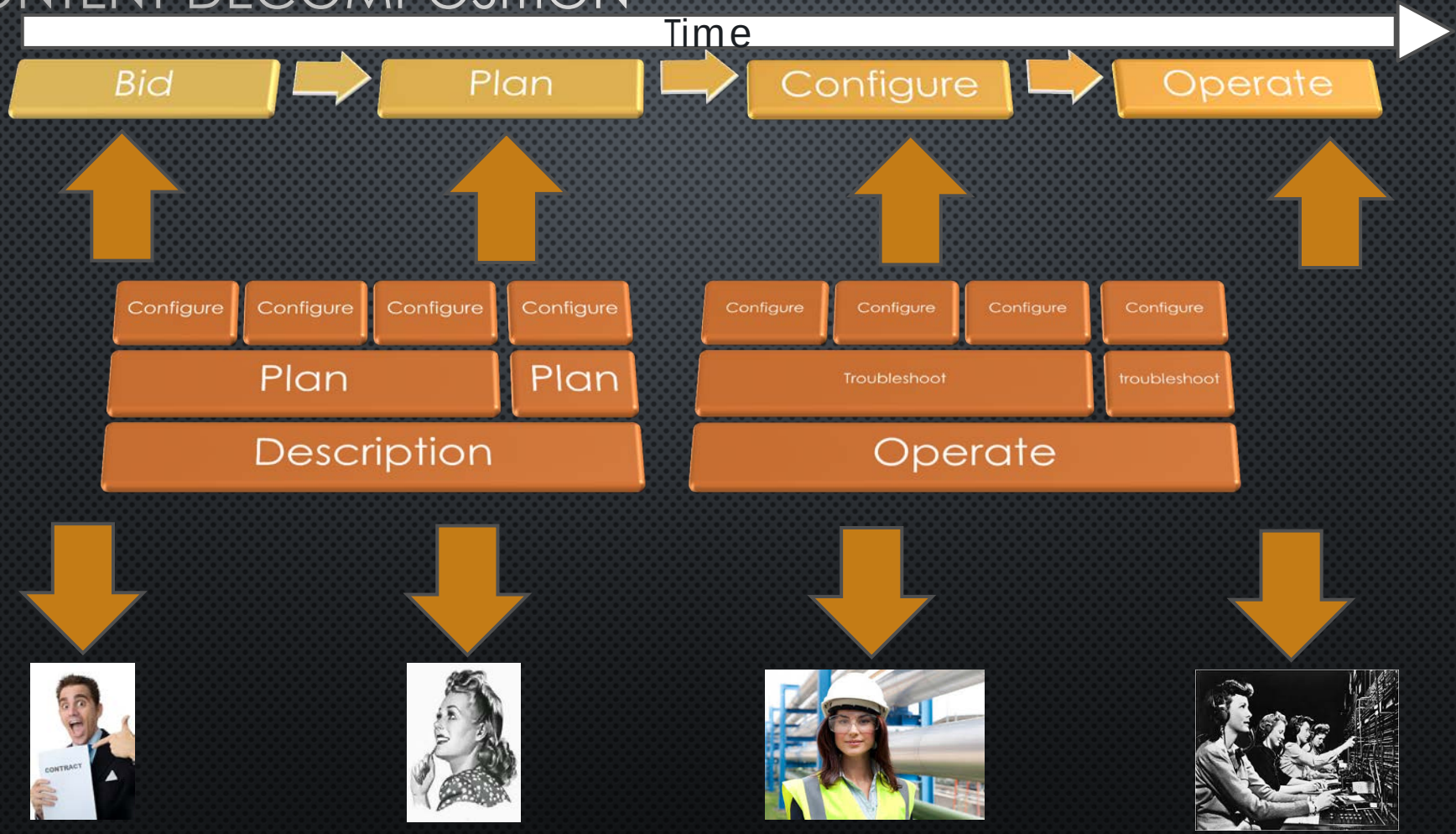
Different requirements:

- Audience
- Time
- Type
- Format
- Delivery

PURPOSE, FORMAT, AUDIENCE



CONTENT DECOMPOSITION

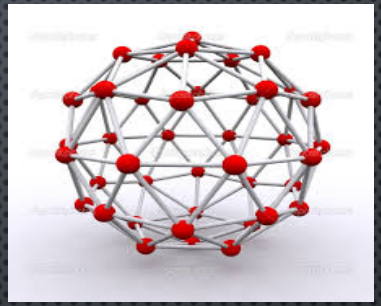


MOLECULAR CONTENT

A book is:
Too big
Just wrong

TOPIC

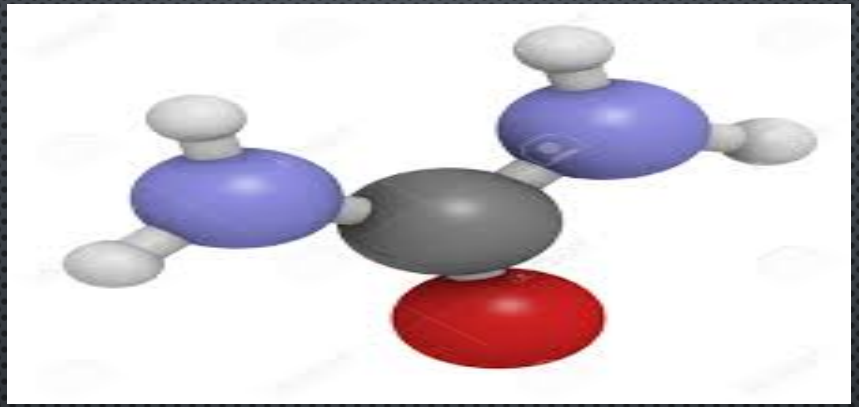
A topic is:
Too small
Unstructured
Unhelpful



Molecular content:

- A way of describing
- A way of communicating
- A way of understanding

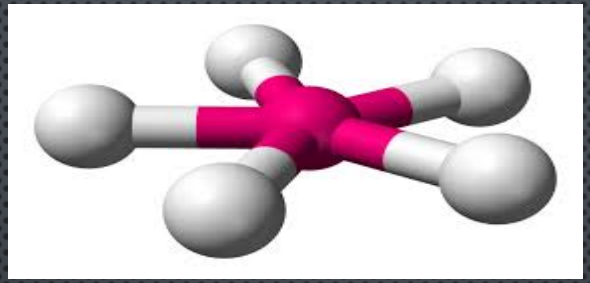
CONTENT MOLECULES



A content molecule is standalone content that:

- Is conceptually consistent
- Is the least specialized possible to fulfil its purpose
- Can be formed and reformed into larger molecular structures
- Could be given a title and short description

A CONTENT MOLECULE



A content molecule can be:

- A collection of topics- describing a common functionality
- A deliverable- content required for a specific delivery over a single UI at a particular time for all or some end users
- A collection of deliverables- content required for a specific delivery over more than one UI
- A set of deliverables- content required for delivery over more than one UI, at different times
- A collection of sets of deliverables

A COLLECTION OF TOPICS

Characteristics:

- Is not a deliverable in itself
- Describes a particular function, or the configuration of that function perfectly
- Will form part of a deliverable, multiple deliverables for the same function/product, or part of a deliverable/multiple deliverables for different products/functions

Is a building block, like a container or microservice

A DELIVERABLE

A delivery:

- For a single function/product
- Likely to relate to a particular sprint
- For a specific delivery/integration date
- A single collection of topics, help items, inline code content, or text delivered over a single UI

A COLLECTION OF DELIVERABLES

A collection of deliverables:

- For a single function/product
- Likely to relate to a particular sprint
- For a specific delivery/integration date
- Collection of topics, help items, inline code content, or text delivered over more than a single UI

A SET OF DELIVERABLES

- For a single function/product
- Likely to relate to a particular sprint
- Collection of topics, help items, inline code content, or text delivered over more than a single UI
- For different delivery/integration dates

A COLLECTION OF SETS OF DELIVERABLES

- For multiple functions/products
- Collections of topics, help items, inline code content, or text delivered over more than a single UI
- For different delivery/integration dates

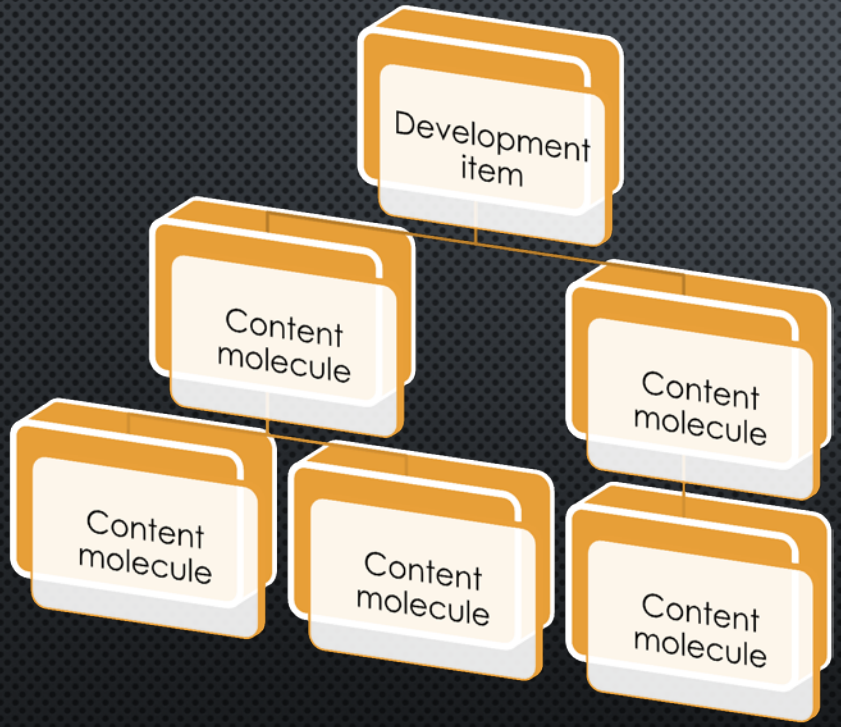
AN EXAMPLE: SINGLE FUNCTION/PRODUCT

Development Kanban

Content Kanban

Purpose	Format	Nature
Sales	HTML	Evolving
Planning	HTML	Supports planning and deployment
Configuration	Inline code	Help
Operate	HTML/ inline code	Operate

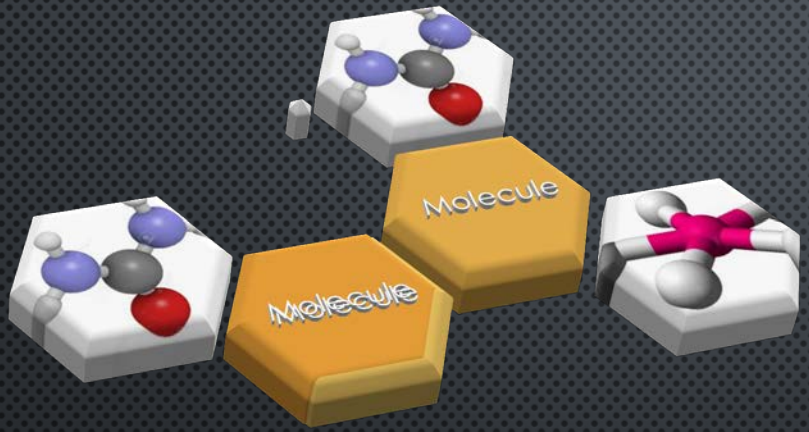
CONTENT REQUIREMENTS DECOMPOSED INTO MOLECULES



Molecule Specification

Integration date
Format
Audience
Purpose

MOLECULAR CONTENT OVER MOLECULAR ORGANIZATION

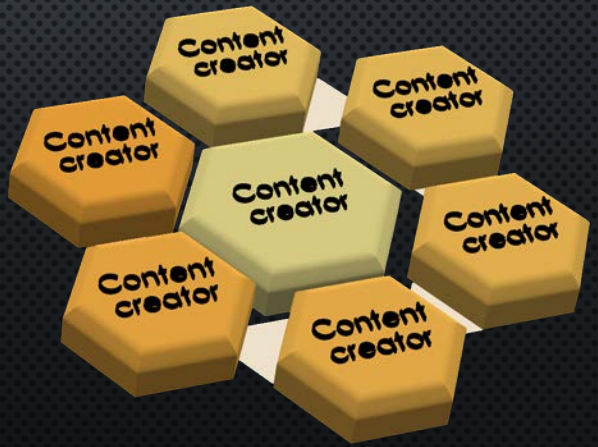


Molecular specification:

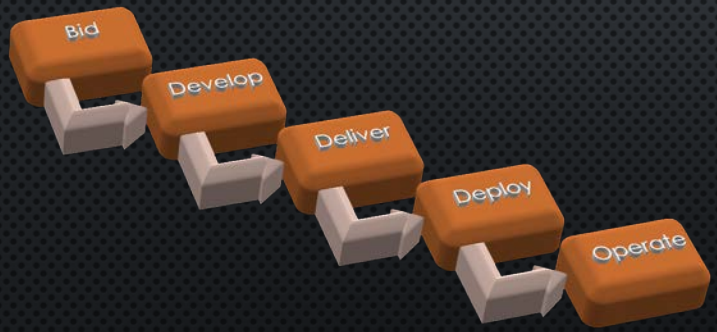
- Knowledge
- Experience
- Location

Scheduling:

- Without team de-limiters
- Without geographic boundaries
- Time-based
- Task-based



WHAT DO WE GET?



Share the pipeline:

- Common specification
- Common triggers
- Common tools
- Integrated testing
- For required content: common compilation and deployment

Differentiated content:

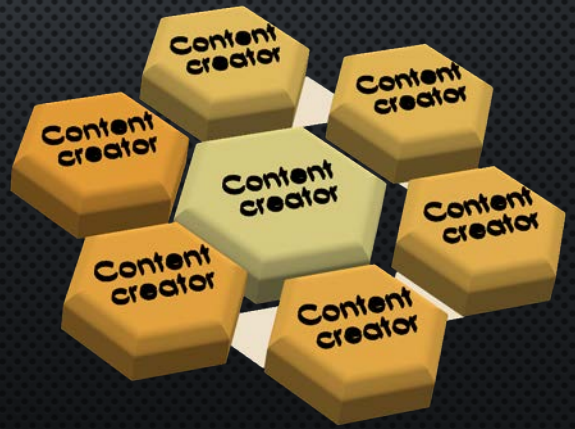
- Purpose
- Delivery date
- Audience
- Format
- Customer

WHAT ELSE DO WE GET

- **Product A**
  - Molecule 1
  - Molecule 2
- **Product B**
  - Molecule 3
  - Molecule 4
- **Product C**
  - Molecule 5
  - Molecule 6

- Coordinated delivery of content for dependent micro services
- Maximum reuse across products
- Common examples, terminology, considerations

- Optimized resource allocation
- Removal of administrative silo-ing
- Diminishing of product specialization
- Scheduling based on standard criteria
- Mirroring agile/DevOps



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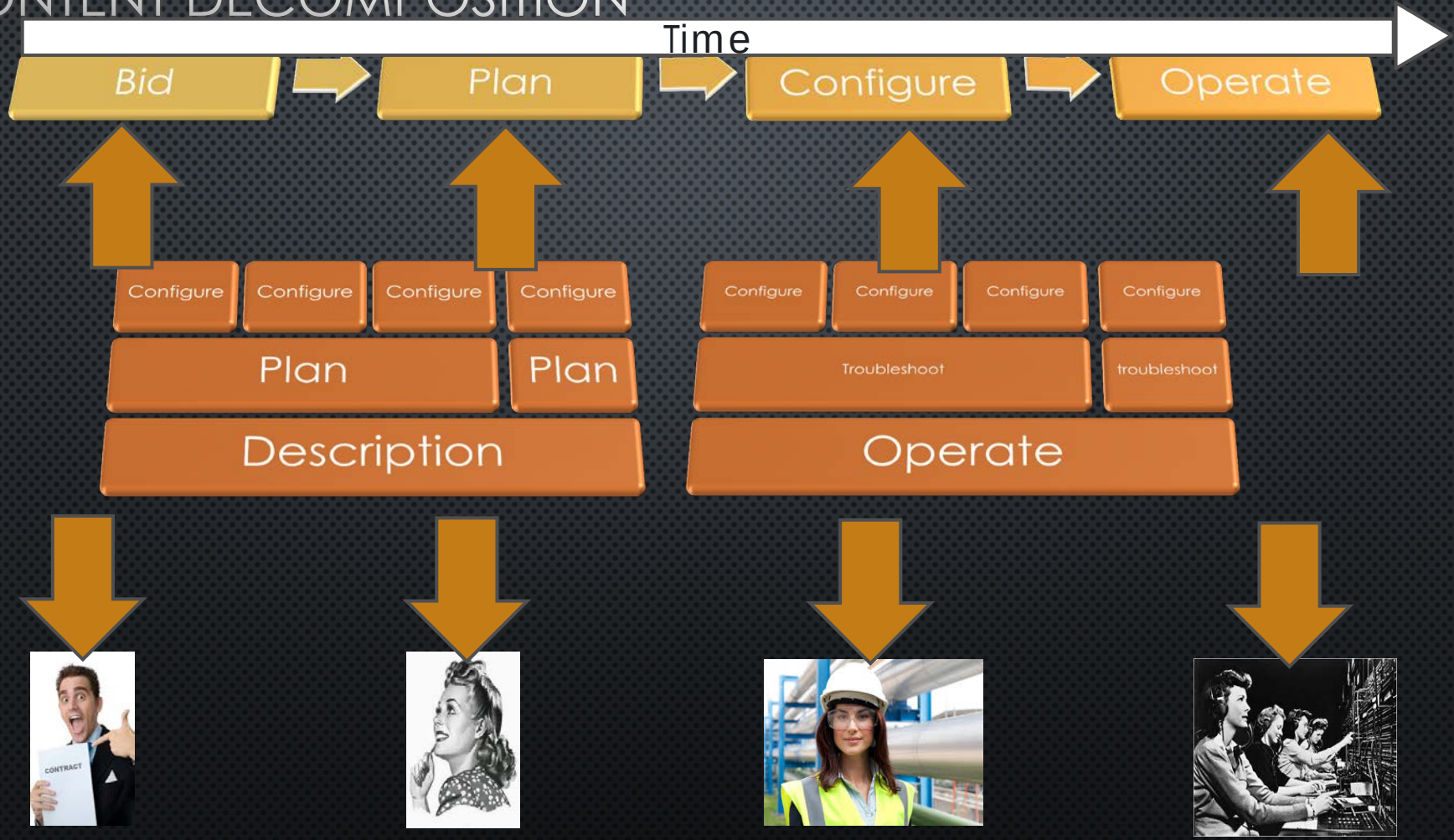


MORE?

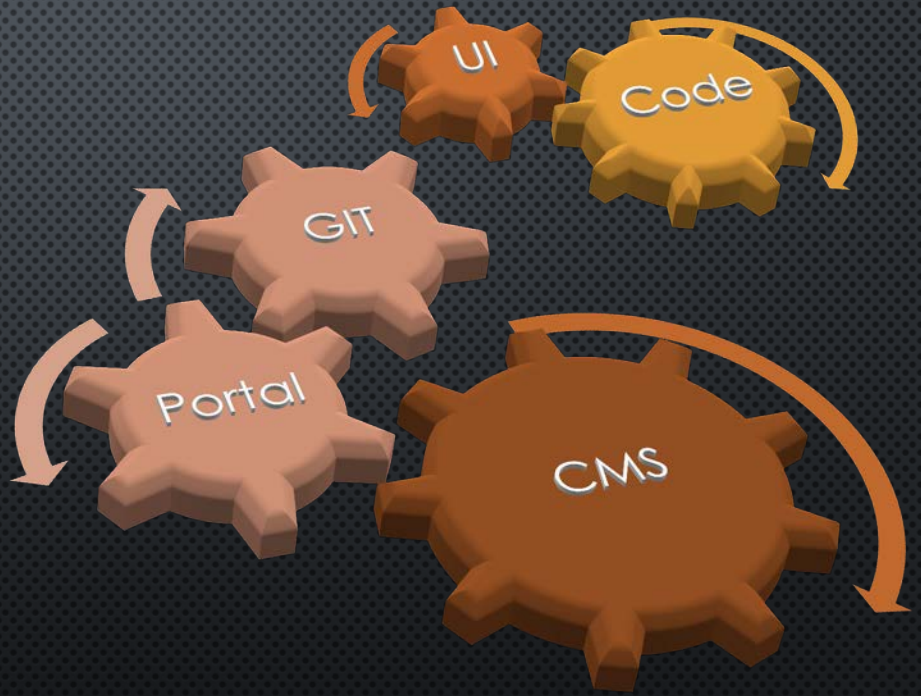
Communicate complex requirements to teams:

- Geographically separate
- Different knowledge levels
- Different experience levels
- Creating distinct but related content
- Need a purpose/storyline

- Enable a big complex company to act like a start-up/ Open source
- Focus on what the customer sees
- Easy incorporation of Acceptance Test Driven Development

WHAT YOU DO NOT HAVE TO GIVE UP

- DITA
- CMS
- Topic based writing



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