IBM

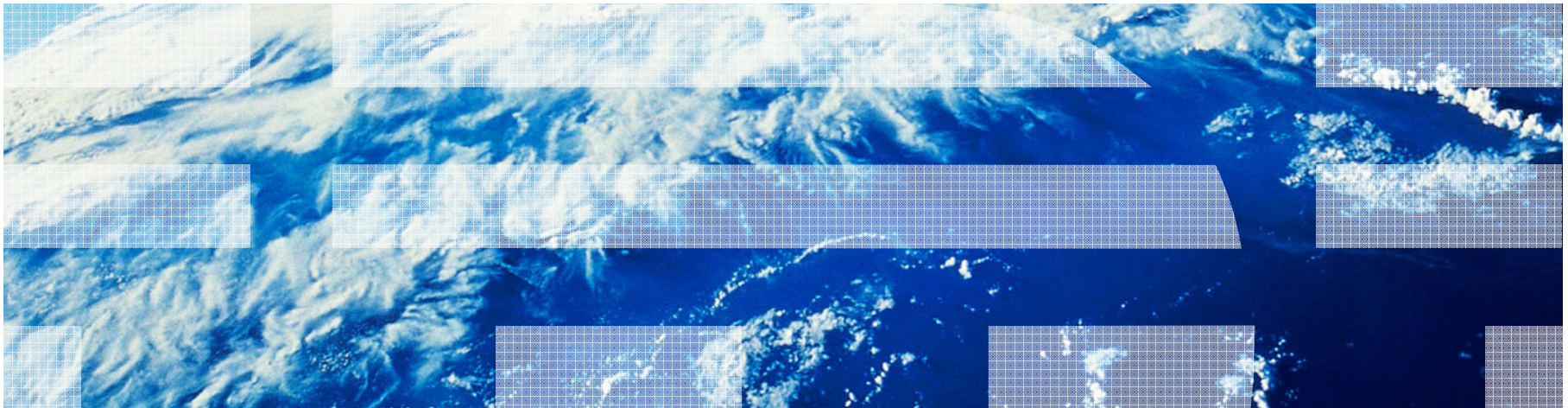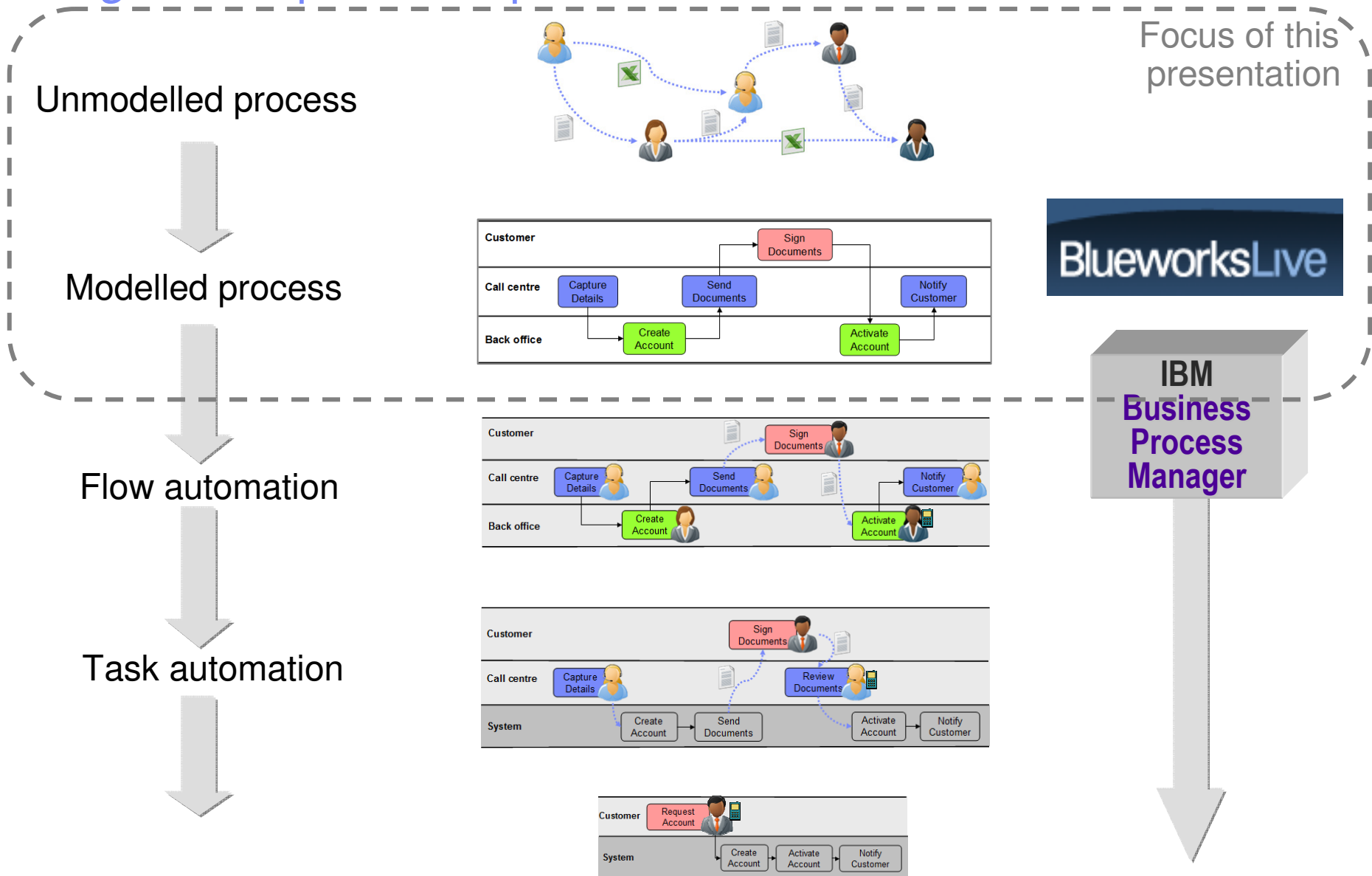# Process modeling at enterprise scale using BlueworksLive and IBM BPM

Abstract

- Blueworks Live's is a powerful, web based, modelling tool that makes mapping processes incredibly easy and collaborative.

- Many see it as simply a brief stepping stone before moving on to full automation of a process using for example IBM BPM. However, the benefits of process modelling alone are often overlooked.

- Blueworks Live is used by many companies to model processes across the enterprise for broader objectives such as compliance, training, and process optimisation.

- In this session we look at more advanced usage of the Blueworks Live tool and at the good practices that have evolved from these larger sites. These include:
    - managing an enterprise wide modelling programme,
    - governance,
    - modelling guidelines,
    - correlation with lean six sigma techniques,
    - modelling for later simulation and execution

- We will also look at how to maximise the benefits of Blueworks Live using some of the most recent features in the product.
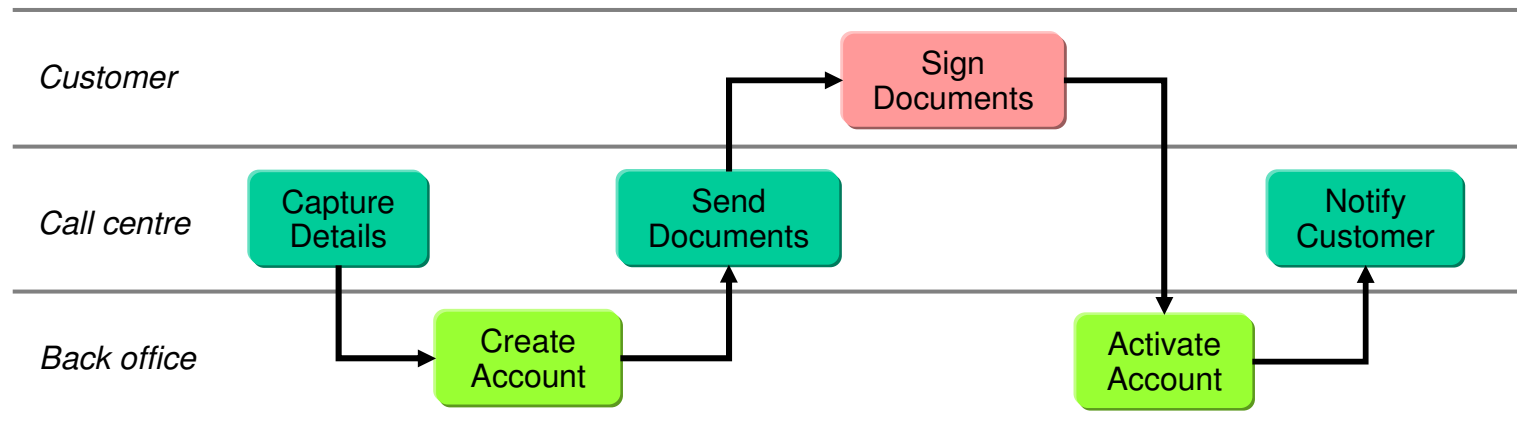
Agenda

- Introduction

- Process modelling at scale with BlueworksLive

- Correlation with other concepts/methods/techniques

- Modelling for simulation in IBM BPM

- Recent features in Blueworks Live

Progressive process optimisation

Unmodelled process

Modelled process

BlueworksLive

IBM
**Business
Process
Manager**

Flow automation

Task automation

There are significant benefits to process modelling alone
An unmodelled process can't be optimised

Customer		Sign Documents	
Call centre	Capture Details	Send Documents	Notify Customer
Back office	Create Account	Activate Account	

Process understood and visible to all

Provides a common language between the business and IT

Provides documentation for training and compliance

Enables process analysis and re-engineering

A cloud-based platform for collaboration on processes

Benefits of process modelling in Blueworks Live

Simple user set-up via a secure cloud based tool. No installation required.

Easy to lean with an intuitive interface that requires minimal training.

**Collaborative environment** where multiple users can work concurrently, and track activity on the model.

Centralised repository so everyone always has the latest copy of the model.

Model validity is enforced (to BPMN), to improve the consistent readability of models across the organisation.

Glossary of terms is implicitly built and can be refined by the administrators to encourage consistent use of language.

Documentation on the process lives within the model, not in a separate document.

Analysis tools that are simple to use enable a high level understanding of the attributes stored against the tasks within a process.
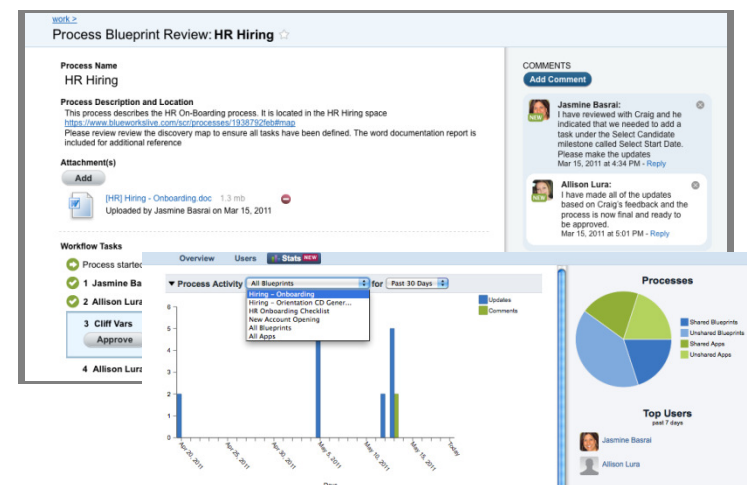
Common process related deliverables

BlueworksLive

Within BlueworksLive
- Process map
- Process diagram
- Process metadata
- Prioritised user stories
- Path playbacks
- Basic analysis

IBM Business Process Manager

In IBM BPM
- Process simulation
- Wireframes for graphical user interfaces
- Process prototype
- Process automation
- Integration

Complementary deliverables
- Process roadmap
- Business glossary
- Business object model
- Organisation structure
- Integration/Services Catalogue
- Lean/Six Sigma outputs

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# Tips on process modelling at enterprise scale with BlueworksLive

1. Modelling guidelines

2. Process modelling levels and roles

3. Is the reason for process modelling the same across the enterprise?

4. Space hierarchies – how to group your processes

5. Have a regularly archived user sandbox

6. Process templates

7. Governance of the process models

8. Information sources

9. Visibility of activity at various levels

10. User types – the value of Viewer licenses

11. Blueworks live at account level

Modelling guidelines

- Naming conventions
- Granularity
- Rule of 7
- Constellations
- String of Pearls
- Milestone traversals
- Loops vs. sub-processes
- Process flow vs. UI navigation
- System lane usage

Redbook containing modelling guidelines
http://www.redbooks.ibm.com/abstracts/sg247973.html
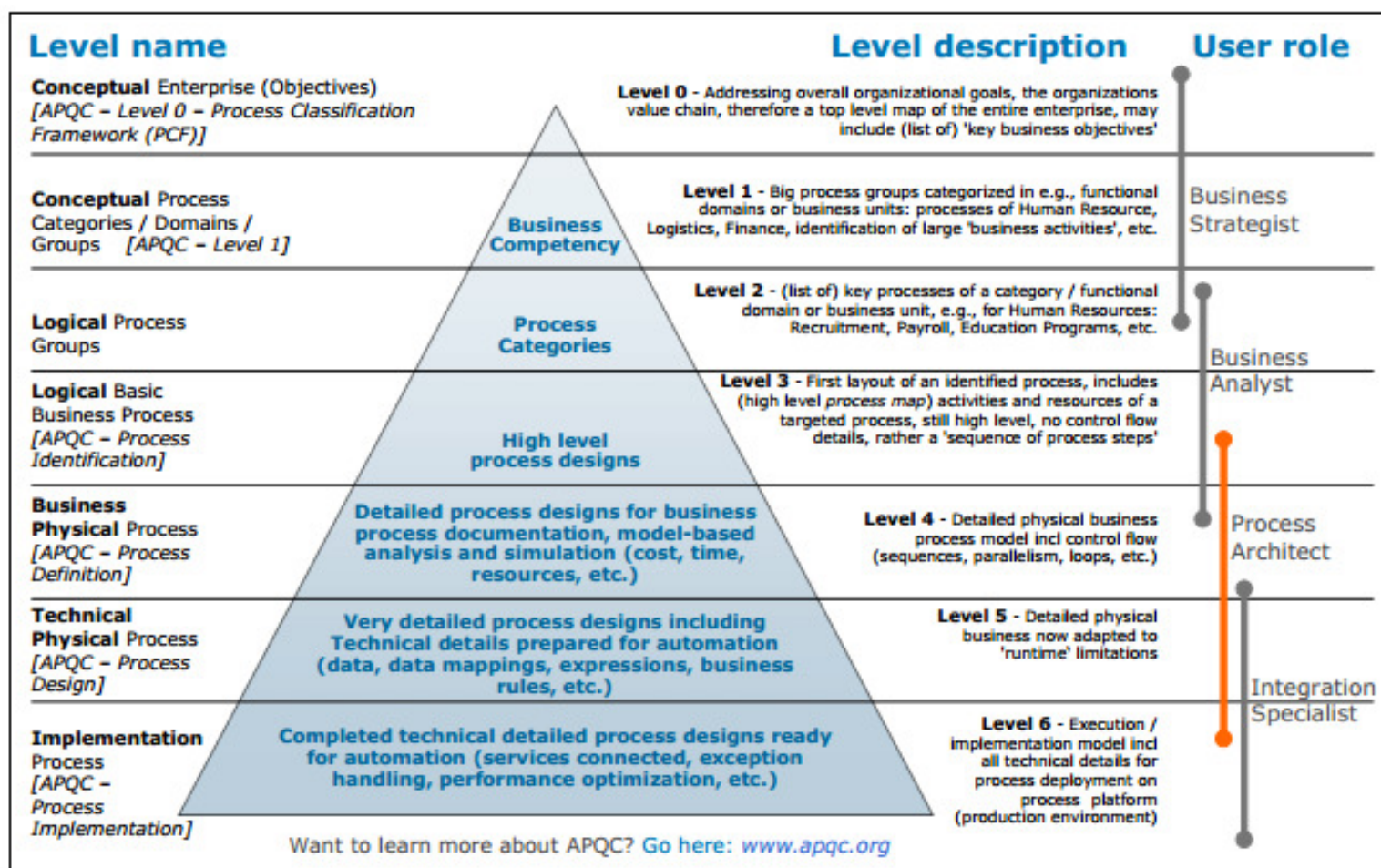
Process modelling levels and roles

The Process Architect: The Smart Role in Business Process Management
http://www.redbooks.ibm.com/abstracts/redp4567.html

Is the reason for process modelling the same across the enterprise?

Operational instructions
- Provide reference information for operational users involved in the process such that they can access a constantly up to date visual representation of the process with documentation inline that is collaboratively maintained by their own community.

Training
- Enable staff new to the process to self train on the workings of their day to day processes, and easily find and collaborate with subject matter experts.

Visibility
- Enable people throughout the organisation to gain an up to date picture of how other departments function and interact with one another.

Compliance
- Provide evidence for regulatory or other purposes that processes are clear, stablised, and documented.

Process re-engineering/optimisation
- Provide key input for re-engineering programmes aimed at changing the process to make it more efficient based on business goals.

Process automation
- Provide key input for exercises that aim to introduce greater automation into the process, by improving the workflow (the flow and prioritisation of tasks between people), and/or by completely automating some of the tasks by integration with back end systems.

Space hierarchies – how to group your processes

Functional hierarchy

```
        Banking
   ┌──────┼──────┬──────────┐
 Retail Commercial Corporate Investment
```

Project hierarchy

```
        Enterprise
   ┌──────┬──────┬──────┐
Project 1 Project 2 Project 3 Project 4
```

Functional hierarchy – Provides for a more sustainable process repository over time
- Business functional domains are (relatively) constant over time.
- People will know where to find processes, if they know the business
- Access permissions will align well with organisational roles and departments
- *Takes some analysis to come up with the hierarchy.*
  - *Consider for example Component Based Modelling techniques to find the initial categories*
  - *Consider an industry process model such as IFW in Banking, or APQC standards.*
- *What do you do with processes that cross functional areas?*
  - *Consider an additional hierarchy based on "value chains" which inevitably cross functional boundaries. This could then use links to processes in the functional hierarchy.*

Project hierarchy – Initial benefits, but must migrate to a functional hierachy over time
- Project names are known, so the setup is easy
- Simple whilst the project is running to find related material
- *Not good for long term reference to processes as project context gets forgotten*
- *Duplication if a new project works on process originally created by a previous project*
- *Consider creating new processes via projects, then migrate to functional on completion*

See "*Best Practices for Organizing Spaces*"
https://www.blueworkslive.com/#!posts:10000ce3e3458cf

Have a *regularly archived* user sandbox

Users (especially beginners) need somewhere safe to experiment to ensure they do not feel intimidated by the tool, or by new way of working.

Create a "User Sandbox" space within which users can create their own spaces and processes.

Issues with the sandbox
- We want people to collaborate, not hide away in a personal space
- The experimental processes created will pollute the account's glossary and make it impossible to maintain

Recommendations
- Make it clear that this is just a "play" area by archiving it's contents periodically.
- Send a notification to all users before the archive, and mention the archiving in the title of the space. E.g. "User Sandbox (archived monthly)"
- *Remember*: nothing is ever deleted in Blueworks Live, so users can always un-archive a process if they really need to.

Process Templates

Provided templates
- A vast number of pre-built templates are provided in the library, include many based on the APQC standard. They may provide an excellent starting point, and/or provide useful insight into common vocabulary.
  - https://www.blueworkslive.com/#!library:templates

New "enterprise" templates
- You cannot add new templates into the BlueworksLive library at this time, but remember, you can start a new process by taking a copy of a old one. Create a special space for "Enterprise process templates".

Issues with templates
- Is it really the same?
  - If the processes really are that similar, are they not just variations of the same process. Might it be better to use decision services (rules) to capture the differences so they are more easy to compare with one another.
- What's the risk of introducing inaccuracy?
  - If you use a process template even with just 10 tasks, each with full activity metadata pre-populated, that's 100s of fields of pre-populated data that you need to go through and check to see if it applies to this new process. How long will that check take? What would be the cost of inaccuracies if you miss something?
- Is it really saving you time?
  - New processes really are very rapid to create. Do the benefits of a template really outweigh the risk of not properly collaborating to create the process?

Governance of the process models

Access
- User types (Editor/Contributor/Viewer) – Viewer or contributor licenses may be sufficient for many users
- Utilise space and process permissions
- Restrict by domain (e.g. mycompany.com)
    - Note: any business partners will need an email email address within your company
- Restriction by IP address
    - Note the IP address is that provided by the ISP, not that of the IP of the machine you're on.
    - Take care when switching this on – how will you turn it off if you get it wrong?
- Single sign on – available, but not for all accounts.
    - Contact support@blueworkslive.com
    - https://www.blueworkslive.com/scr/home#!posts:10000723d30825a

Process Review
- Use "Work" function for review lifecycle
    - Provides simple lightweight way to request a review cycle on a process
    - *High level statistics on recent review activity*
    - *No long term historical record of the reviews performed (other than the history within the process itself)*
- Use space permissions to create separate "Draft", and "Approved" space hierarchies

Admin functions summary
- Useful if you are not an administrator, but want to know the art of the possible
- https://www.blueworkslive.com/home#!posts:10000ae3e95c27e

Information sources

- ## Help
  - Overview, movie tutorials, FAQ
  - Documentation (incl. the **API docs**)
  - **User forums**
  - Button to access the **support portal**

- ## Blogs
  - Release announcements, good practice
  - May only be accessible when *not* logged in (admin setting)

- ## What account am I in?
  - What account you're in if you have more than one.
  - Also links to release announcements in the Blog.
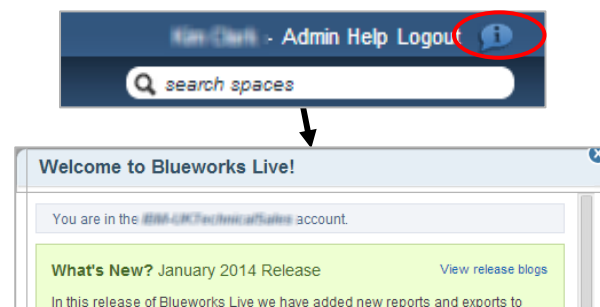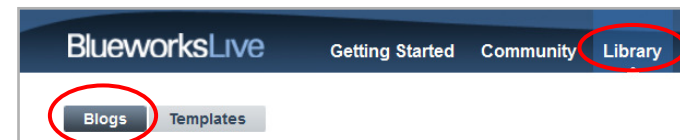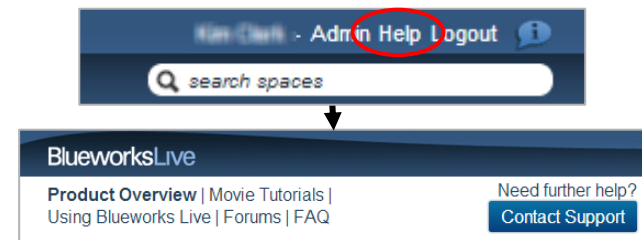
Visibility of activity at various levels

Activity Stream

- **Community** (account) level – activity stream
  - By Date, User, Process, Space across whole account
  - Note: only place you can view all activity of a specific user
  - Users can add "*Posts*"

- **Space** level – activity stream
  - "*Posts*" can be added by Editors

- **Process diagram** level – changes
  - Changes tab visible only when **not** in "edit mode"
  - **Clicking on specific activities filters the content to that activity**
  - **Clicking on the background of the process show all changes**
  - Provides "before" and "after" values
  - "Comments" can be posted by *editors* and *contributors*
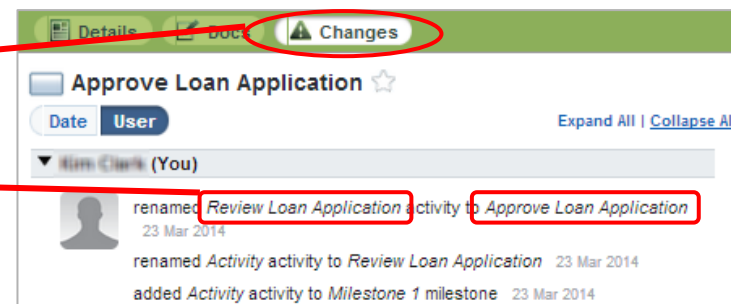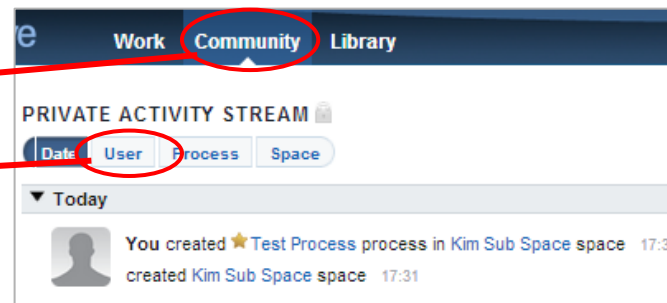
  Describes changes *only* within past 30 days

Process Statistics
- Available at the space level
- Aggregated statistics only, no detail
- 12 months history available
- Can export to Excel

Snapshots
- Snapshots are *always* at the process level
- ***Manual snapshots remain indefinitely***
- ***Auto-snapshots*** are taken regularly after significant changes, but are **not kept forever**
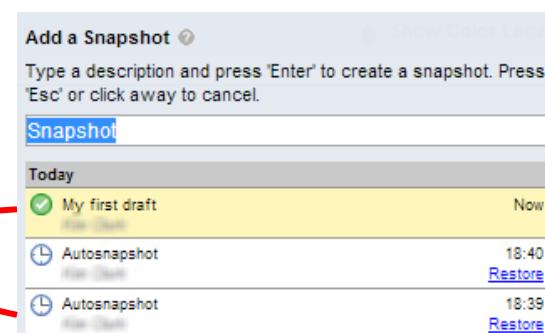
User types – the value of Viewer licenses

Viewer licenses are a great low cost way to demonstrate the value of process models to a broader audience. The more people are familiar with the look of the process models, the easier your process improvement discussions will be.

Administrators don't see the "Viewer" option at all if the account has no viewer licenses. Ensure they know they exist!

Administrators can move people between user types at any time. Could some editors change to contributors/viewers when the project completes?

Currently the landing page for viewers shows *only* a search dialogue. Once they've searched and viewed a process it will show up under "Recently Viewed" and they can "Favourite" the process if they know they will access it regularly.

User Type	Description
Editor	Editors can create, modify, and share process Blueprints and Apps. They can launch and participate in work
Contributor	Contributors can create and participate in work and view and comment on shared processes. Contributors cannot modify or create process Blueprints.
Viewer	Viewer can only view shared Process Blueprints. They can not participate in work and do not have access to spaces, or activity streams.

Blueworks live at account level

What's at account level
- An account is a completely self contained set of process Blueprints and Applications.
- A customer can have more than one account, but many have only one.
- Users with more than one account choose from a list at logon.
- Accounts have complete data isolation – even within the same company.
- Administrators log into a specific account at a time, so all administration functions are per account.
- Examples of actions at account level data
  - Administration
  - Restricting and adding properties
  - Glossary
  - User admin/stats

Should you have multiple accounts?
- Advantages: Isolation of business areas
- Disadvantages: Cost implications – users in two accounts pay twice
- Note: Processes can be copied between accounts by *editors* who have access to both accounts.

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RACI

Responsible
- Those who do the work to achieve the task.

BlueworksLive: "Participant" specified on the activity, which is also represented by the swimlane the task sits in.

Accountable
- Person answerable for the correct and thorough completion of the task.
- The one who delegates the work to those responsible.
- Must approve the work that the "responsible" provides.

BlueworksLive: "Business Owner" specified on the activity. May also be represented as a separate approval step. Some approval may be described via to a decision service. Delegation of the work may be assumed as a consequence of automation, and/or performed via a decision service.

Consulted
- Those whose opinions are sought, typically subject matter experts; and with whom there is two-way communication.

BlueworksLive: "Subject Matter Expert(s)" specified on the activity.

Informed
- Those who are made aware of progress, maybe only on completion

BlueworksLive: Can be shown as a notification activity, or noted as a reporting requirement in the description. A convention of using the "Customers" attribute could be introduced, but this may confuse normal use of this attribute.

BPM and Lean - Article

Type 1 - Lean Process Improvement
 - Initial process analysis leverages lean approaches to simplify the process prior to automation
 - Elimination of process waste yields immediate benefits for the Bank and its Customer

Type 2 - Lean with BPM (Recommendation)
 Type 1 plus
  Release 1: Human Process Implementation (Fast Lane):
  Routing, KPI, Dashboards, Measurement, Visibility
 - Process Control
 - Basis for continuous improvement
 - Automatic work prioritization
 Improved customer experience
Release 2: Activity Integration (Slow Lane):
 - Integration is prioritized by business value and delivered over time as a backlog
 - Existing and new integrations are designed as process utilities to be reused

Type 2 Release 2 - Slow Lane

Type 2 Release 1 - Fast Lane

Type 1

| Lean Process Improvement | Focus on e2e process, customers and waste reduction | 10-20% |

| Human Process Implementation | Workflow, measurement, dashboard, prioritized task list, UI | 10+% |

| Activity Integration | UI extension, data flow, system integrations | 10-20% |
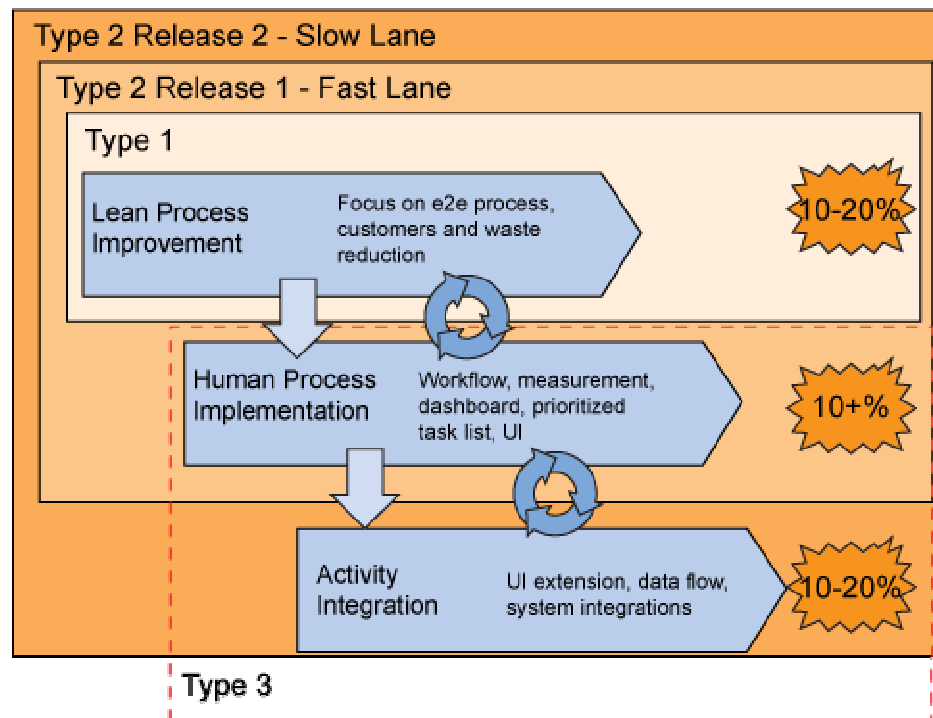
Type 3

Type 3 - Pure BPM
 - Human Process Implementation
 - Activity Integration
 - Blueworks Live
 - No Lean/OE

BPM and Lean - a powerful combination for process improvement - Philipp Schume
 – http://www.ibm.com/developerworks/bpm/bpmjournal/1308_col_schume/1308_schume.html

Lean Six Sigma combines efficiency and effectiveness, driving process excellence, customer satisfaction, and growth.

Six Sigma
Product or Service Outputs

- Increase effectiveness
- Reduce variation
- Eliminate defects
- Reducing variation eliminating defects is the driving force behind improvement efforts

- Decrease cycle time
- Balance work flows
- Focus on high-value steps
- Eliminate waste
- **Process efficiency is the driving force behind improvement efforts**

Customer-focused

Customer-focused

As-is Flow

Future State Flow

Lean

Source: Applying Lean, Six Sigma, BPM, and SOA to Drive Business Results
http://www.redbooks.ibm.com/abstracts/redp4447.html?Open

Blueworks Live, Analysis Mode, Process Diagram, Wait Time

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Blueworks Live, Analysis Mode, Discovery Map, Value Add

Source: Applying Lean, Six Sigma, BPM, and SOA to Drive Business Results
http://www.redbooks.ibm.com/abstracts/redp4447.html?Open

Blueworks Live, Playback Mode, wait time

Source: Applying Lean, Six Sigma, BPM, and SOA to Drive Business Results
http://www.redbooks.ibm.com/abstracts/redp4447.html?Open

Capturing additional data using "custom process properties"

- Custom properties are at the activity level.
- They can be defined by the administrator and appear as additional attributes on activities.
- They are account wide. All users will be able to see them.
- You can have 5 text properties, and these appear as lists
- You can have 5 number properties, and these are a single value

Common examples

  – *Performance*: Volume/capacity

  – *Reporting*: SLA, KPI, monitoring, notification

  – *Location*: Country, region, site

Accept Offer ☆

| Details | Problems | Policies | Documentation | Attachments | Comments |

🐾 ☆ ⊕ ⊖

▼ Risk ⊙
⚠ Medium ▼

▼ Value Add ⊙
✅ Yes ▼

▼ Country ⊙
England ☆ ⊕ ⊖
France ☆ ⊕ ⊖
Germany ☆ ⊕ ⊖

▼ Volume
1000

Choose carefully!
Once you added a custom property, and people start using it,
it will be very unpopular if you try to take it away.

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IBM BPM Optimizer Heat Map - Comparison Simulation
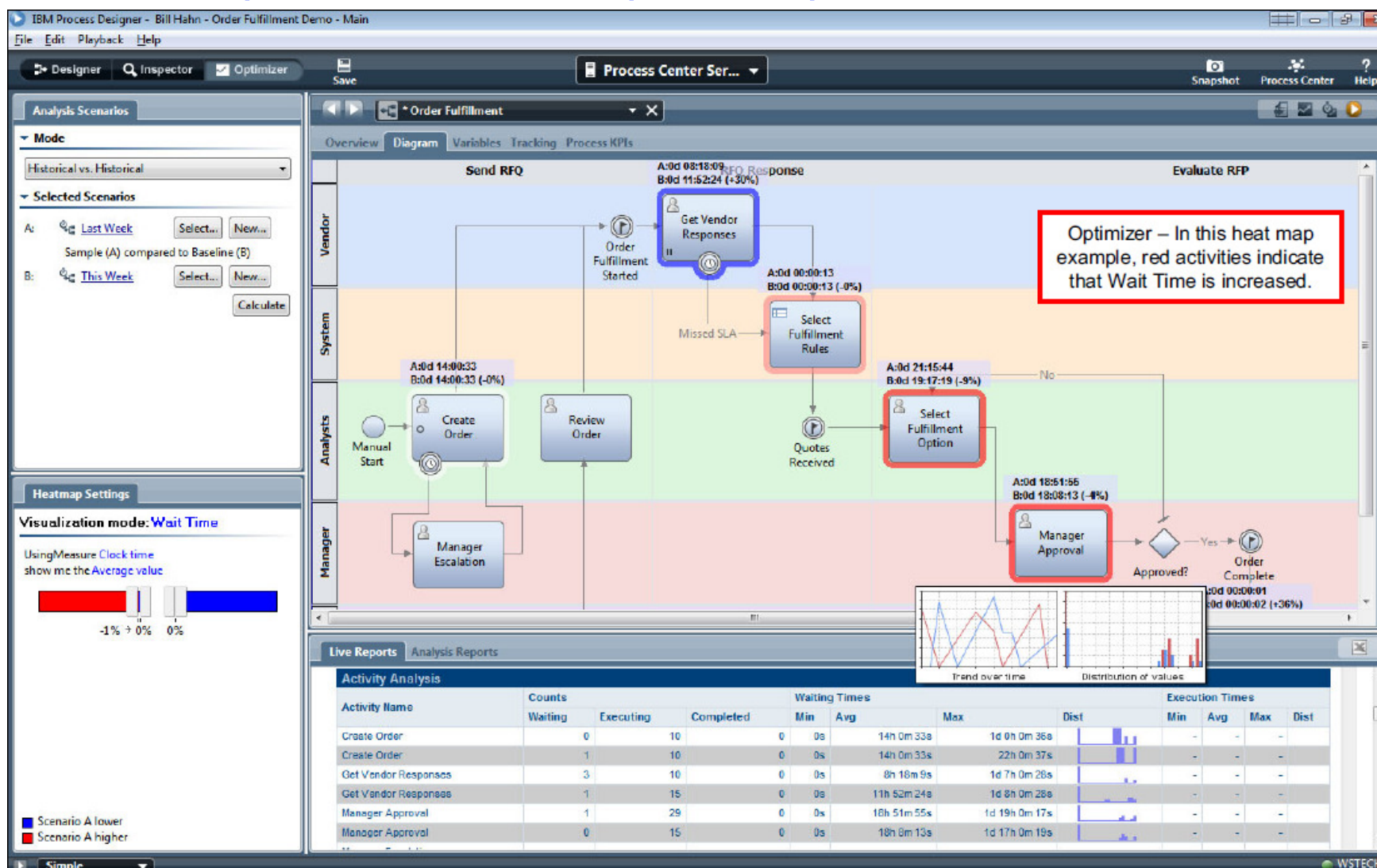
IBM BPM Optimizer Heat Map, Path Analysis

Source: Applying Lean, Six Sigma, BPM, and SOA to Drive Business Results
http://www.redbooks.ibm.com/abstracts/redp4447.html?Open
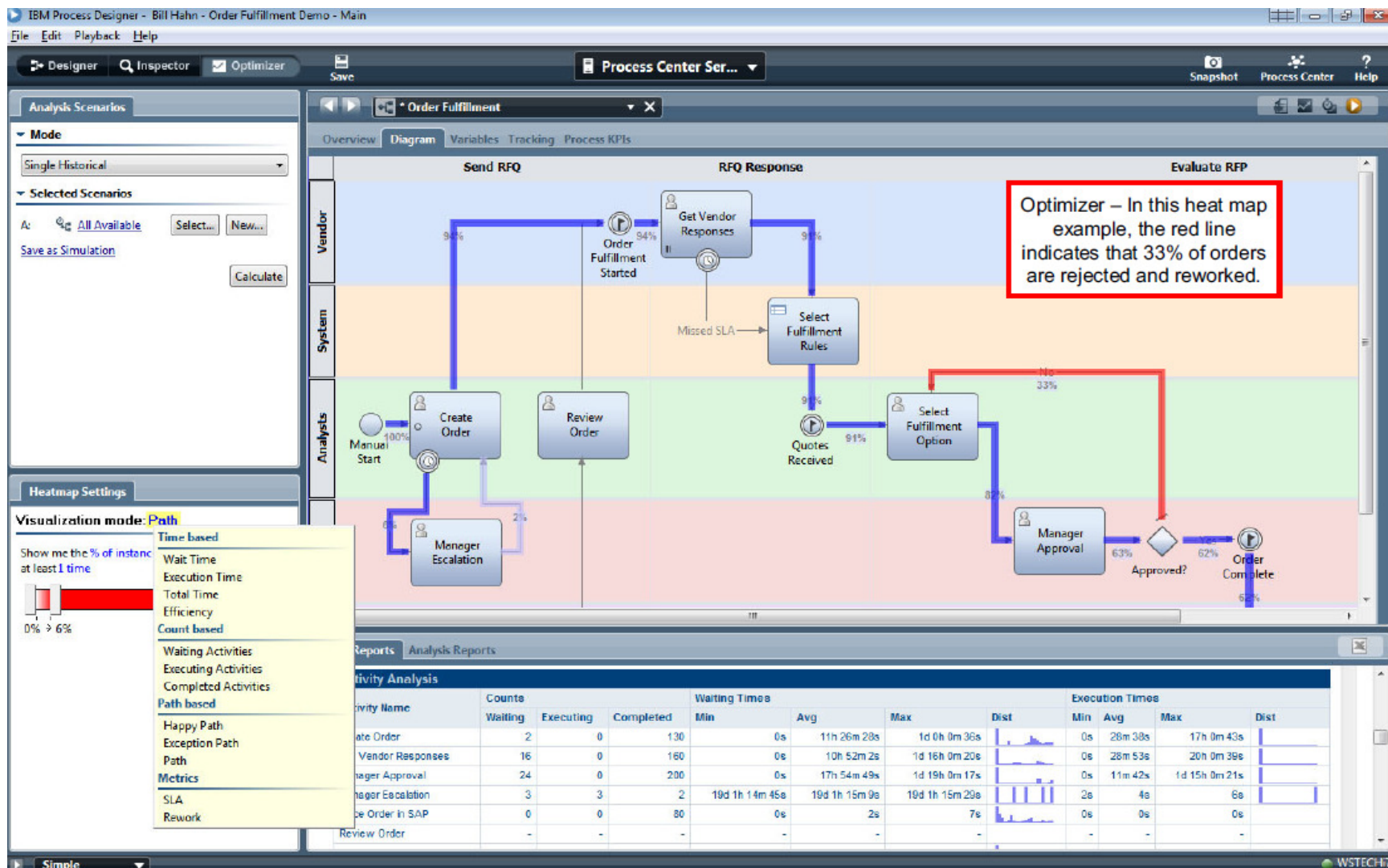
Detail on importing BlueworksLive diagrams into IBM BPM for simulation

- A snapshot must be taken in Blueworks Live to make a version of the model available to IBM BPM.

- The full BPMN diagram is pulled into IBM BPM, implicitly including the "Participants" attribute via the swimlanes

- Total cycle times from Blueworks live become simulation execution times for the activities in IBM BPM

- Any remaining attributes are merged into the documentation field for reference

- Many defaults are present in the IBM BPM process model to enable a simulation to be run immediately, but the following will need to be populated:
    - the "firing delays" for the start event of the process to model the incoming throughput
    - the number of resources in the teams that work the various swimlanes

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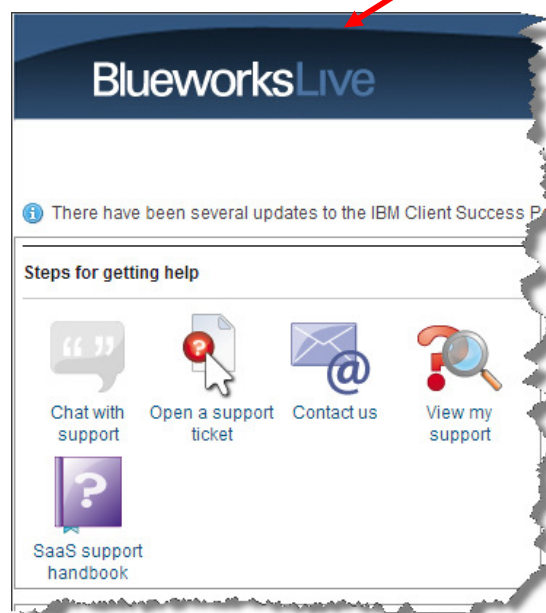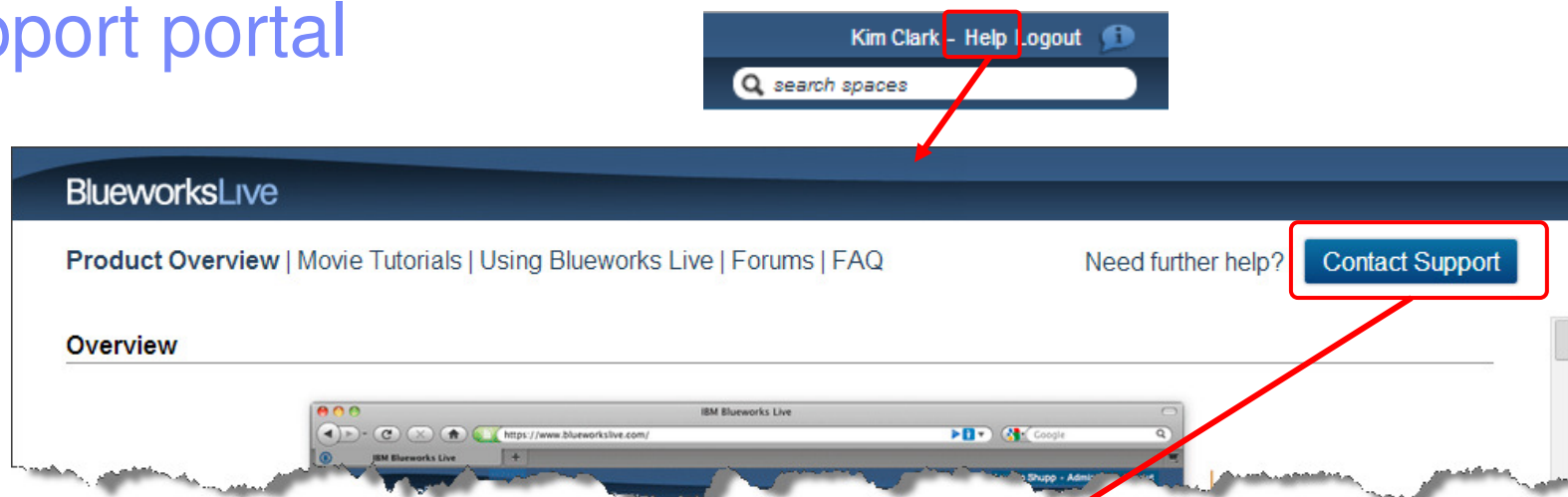
- Recent features in Blueworks Live

Recent features in Blueworks Live (~2 month releases)

- *Decisions*: Graphical and table based modelling

- *Support portal*: Creating/tracking support tickets

- *Process summary*: Aggregation of process attributes

- *Analysis*: Comparing multiple attributes at once

- *Administration*: Custom help pages

- *Space statistics*: Hierarchy navigation, and statistics

- *Activity statistics*: Enhancements, and export facility

- Release information:
  https://www.blueworkslive.com/scr/spaces/20000673e7742fe#!search:q=whats+new&o=0&mr=100&t=tag&sp=true&ops=true

Support portal

Process Summary

Space statistics
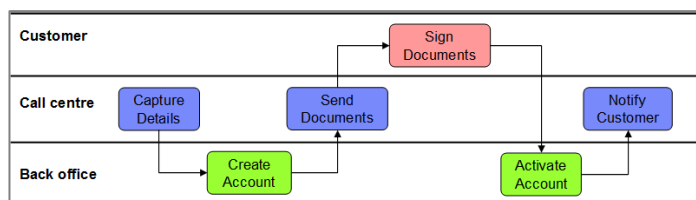
Progressive process optimisation

Manual process

What tasks are being done?
Who is doing them?
How do we know who's next?
Will we finish on time?
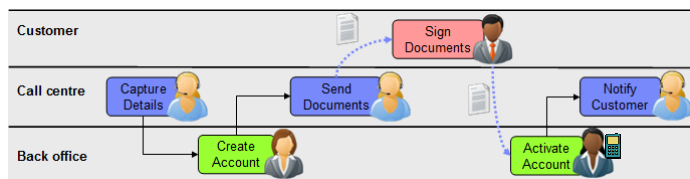How can we manage priorities?

Knowledge is reliant on individuals
Restructuring is the process hard
Re-training is painful
Management information is a burden
Data duplication is inevitable
Data integrity is poor

Modelled process

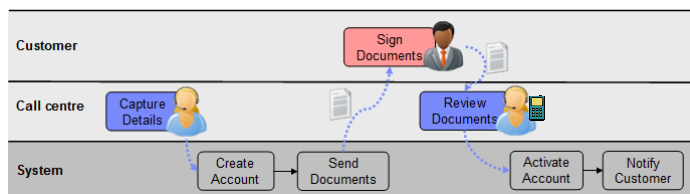| Customer | | Sign Documents | |
| Call centre | Capture Details | Send Documents | Notify Customer |
| Back office | Create Account | Activate Account | |

Process understood and visible to all
Enables process re-engineering analysis
Provides documentation for training and compliance
Provides a common language between IT and the business

Flow automation

| Customer | | Sign Documents | |
| Call centre | Capture Details | Send Documents | Notify Customer |
| Back office | Create Account | Activate Account | |

Reduce reliance on spreadsheets/paper/emails
Reduce time lost on paperwork
Enable mobile interaction with process
Increase data integrity
Enable reporting within and across processes
Simplifies implementation of process re-engineering
Reduce re-training

Task automation

Customer		Sign Documents	
Call centre	Capture Details	Review Documents	
System	Create Account	Send Documents	Activate Account	Notify Customer

Reduce end to end process duration
Simplify data entry
Eliminate laborious re-keying
Reduce duplication
Further increase data integrity
Remove unnecessary touch points

Straight through processing

| Customer | Request Account | |
| System | Create Account | Activate Account | Notify Customer |
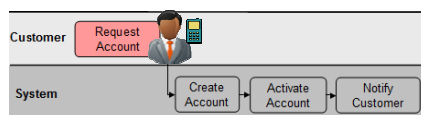
Enables orders of magnitude more volume
Maximises data integrity
Minimises human resource requirements
Variability points established and enabled

References

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    - https://www.youtube.com/user/BlueworksLive

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  https://www.blueworkslive.com/#!posts:10000ce3e3458cf

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    - http://www.redbooks.ibm.com/abstracts/redp4447.html?Open

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- BPMN Method and Style
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धन्यवाद
Hindi

多謝
Traditional Chinese

ขอบคุณ
Thai

Спасибо
Russian

Gracias
Spanish

Thank You
English

شكراً
Arabic

Merci
French

Obrigado
Brazilian Portuguese

Grazie
Italian

多谢
Simplified Chinese

Danke
German

நன்றி
Tamil

ありがとうございました
Japanese

감사합니다