

# FATEC - FACULDADE DE TECNOLOGIA DE SÃO PAULO

Projeto Integrador: *“Aplicação computacional para tomada de  
decisão estratégica na alocação de recursos a partir do  
Gráfico de Gantt”.*

Curso: Tecnologia em Banco de Dados

Turma Primeiro Semestre/2020

Grupo Pydevs

Cliente: NECTO

Maio/2020



## OBJETIVO:


Aplicação computacional gráfica, que possibilite o planejamento estratégico do gestor da equipe, na melhor utilização possível do tempo, com distribuição de tarefas, atribuindo-as a colaboradores, na linha do tempo, melhorando a tomada de decisão;




1) Devem ser verificáveis:

a) o **tempo alocado** por dia/semana/mês/por projeto/recurso humano;

b) o **tempo livre** dos recursos na linha do tempo.



2) Deve possibilitar a tomada de decisão estratégica sobre capacidade da empresa de iniciar novos projetos e cobrir contingências (faltas ou ausências por motivo de saúde, férias, demissões) ou contratar novos recursos humanos;

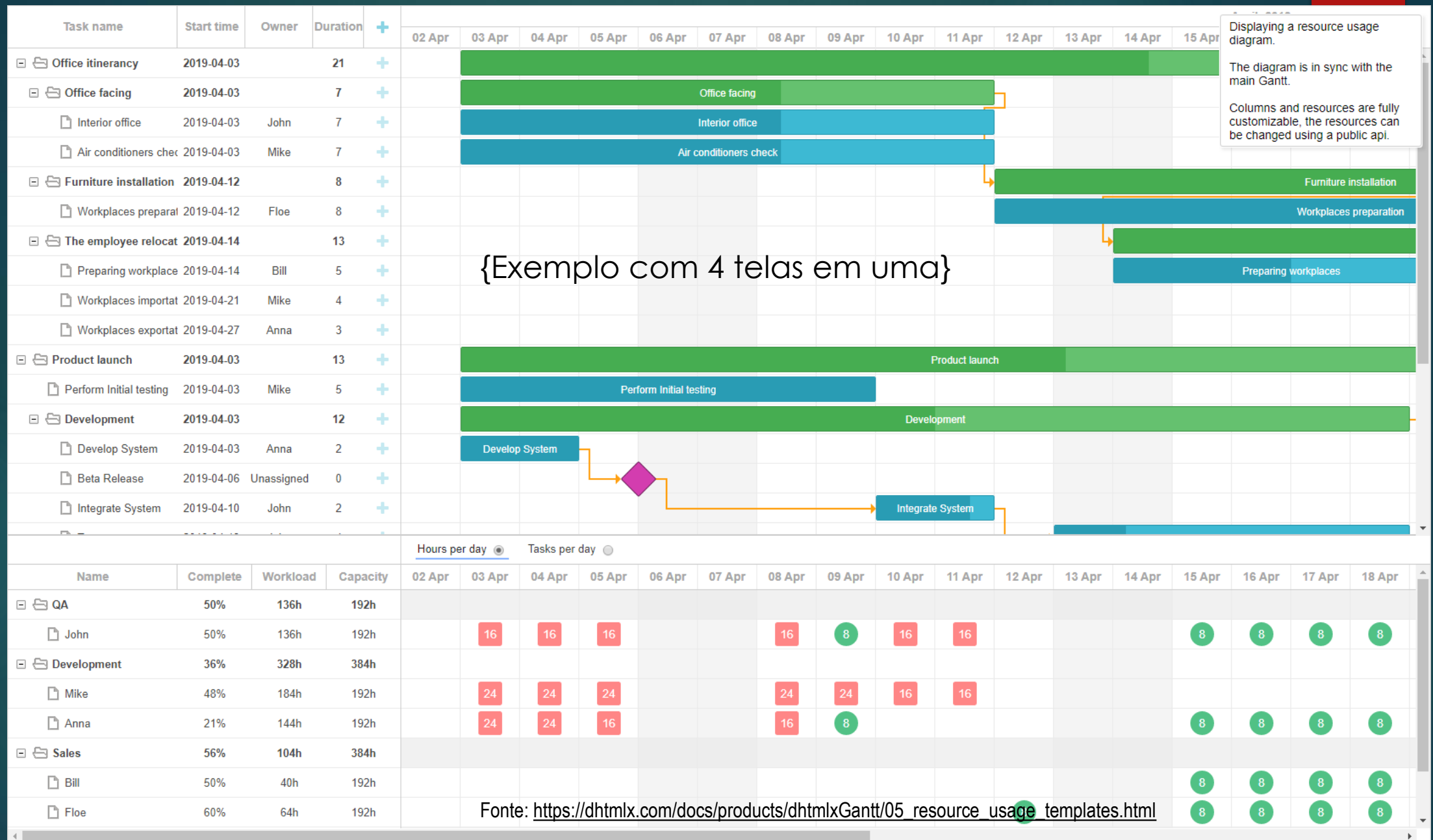


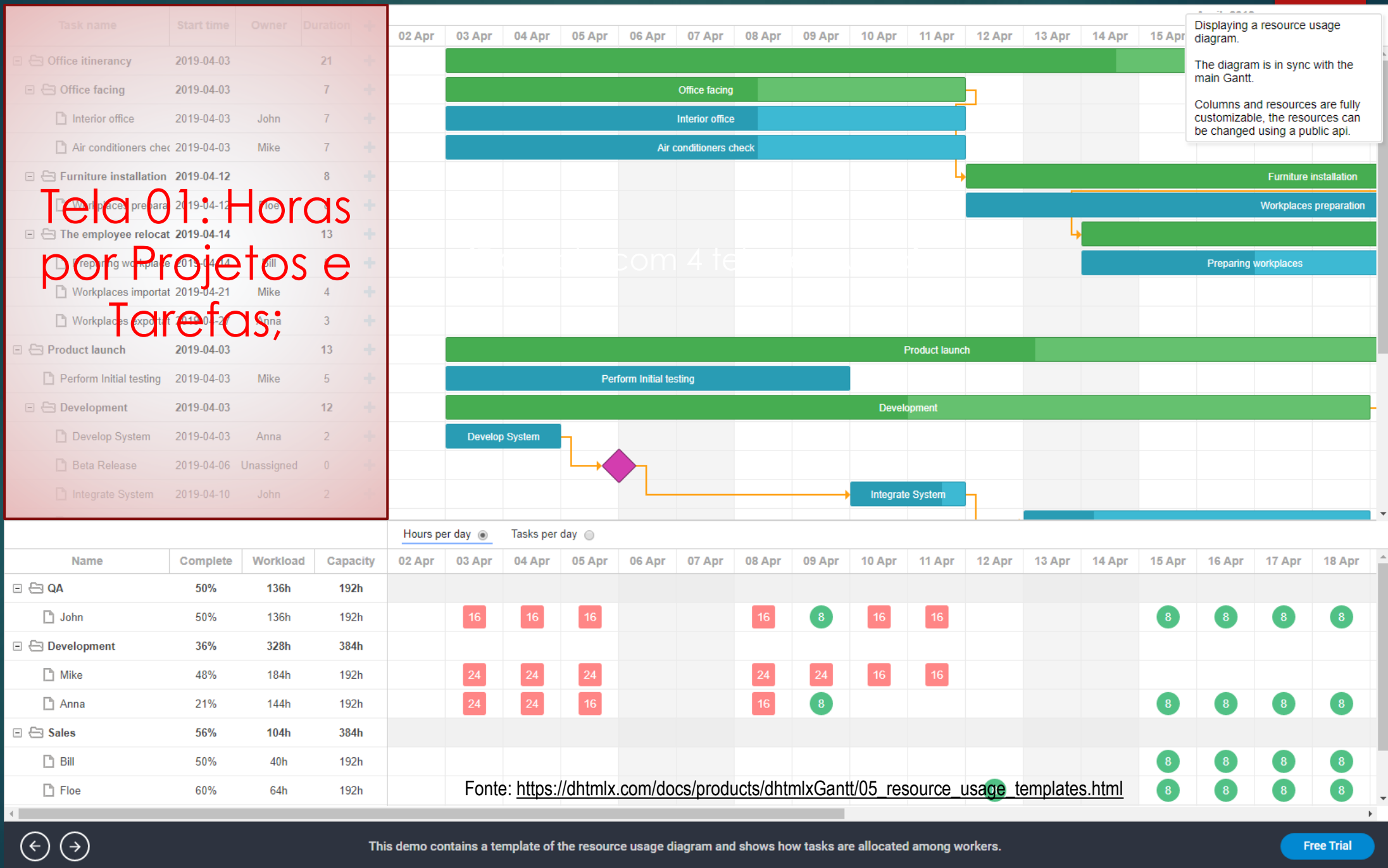
**Visão Presente:** Pesquisa das melhores tecnologias para o caso concreto, conjugando facilidade de desenvolvimento e estabilidade da aplicação em face da capacidade de entrega da equipe do projeto, dentro do tempo disponível.

**Visão Presente:** Após estudo prévio, verificou-se que as ferramentas disponíveis no mundo da programação contemplam diversas funcionalidades, em muitas linguagens e plataformas (de linguagem de programação propriamente dita a software aplicativos v.g. MS Excel).

Com base num exemplo que, neste momento, contemplam os requisitos solicitados pelo cliente, apresentamos nosso desenho conceitual.

Vide diagramas a seguir.







Task name	Start time	Owner	Duration	+
Office itinerancy	2019-04-03		21	+
Office facing	2019-04-03		7	+
Interior office	2019-04-03	John	7	+
Air conditioners check	2019-04-03	Mike	7	+
Furniture installation	2019-04-12		8	+
Workplaces preparation	2019-04-12	Floe	8	+
The employee relocation	2019-04-14		13	+
Preparing workplace	2019-04-14	Bill	5	+
Workplaces importation	2019-04-21	Mike	4	+
Workplaces exportation	2019-04-27	Anna	3	+
Product launch	2019-04-03		13	+
Perform Initial testing	2019-04-03	Mike	5	+
Development	2019-04-03		12	+
Develop System	2019-04-03	Anna	2	+
Beta Release	2019-04-06	Unassigned	0	+
Integrate System	2019-04-10	John	2	+



				<div>Hours per day <input checked="" type="radio"/></div> <div>Tasks per day <input type="radio"/></div>																	
Name	Complete	Workload	Capacity	02 Apr	03 Apr	04 Apr	05 Apr	06 Apr	07 Apr	08 Apr	09 Apr	10 Apr	11 Apr	12 Apr	13 Apr	14 Apr	15 Apr	16 Apr	17 Apr	18 Apr	
<div><div></div><div></div>QA</div>	50%	136h	192h																		
<div><div></div><div>John</div></div>	50%	136h	192h		16	16	16			16	8	16	16				8	8	8	8	
<div><div></div><div></div>Development</div>	36%	328h	384h																		
<div><div></div><div>Mike</div></div>	48%	184h	192h		24	24	24			24	24	16	16								
<div><div></div><div>Anna</div></div>	21%	144h	192h		24	24	16			16	8						8	8	8	8	
<div><div></div><div></div>Sales</div>	56%	104h	384h																		
<div><div></div><div>Bill</div></div>	50%	40h	192h														8	8	8	8	
<div><div></div><div>Floe</div></div>	60%	64h	192h														8	8	8	8	

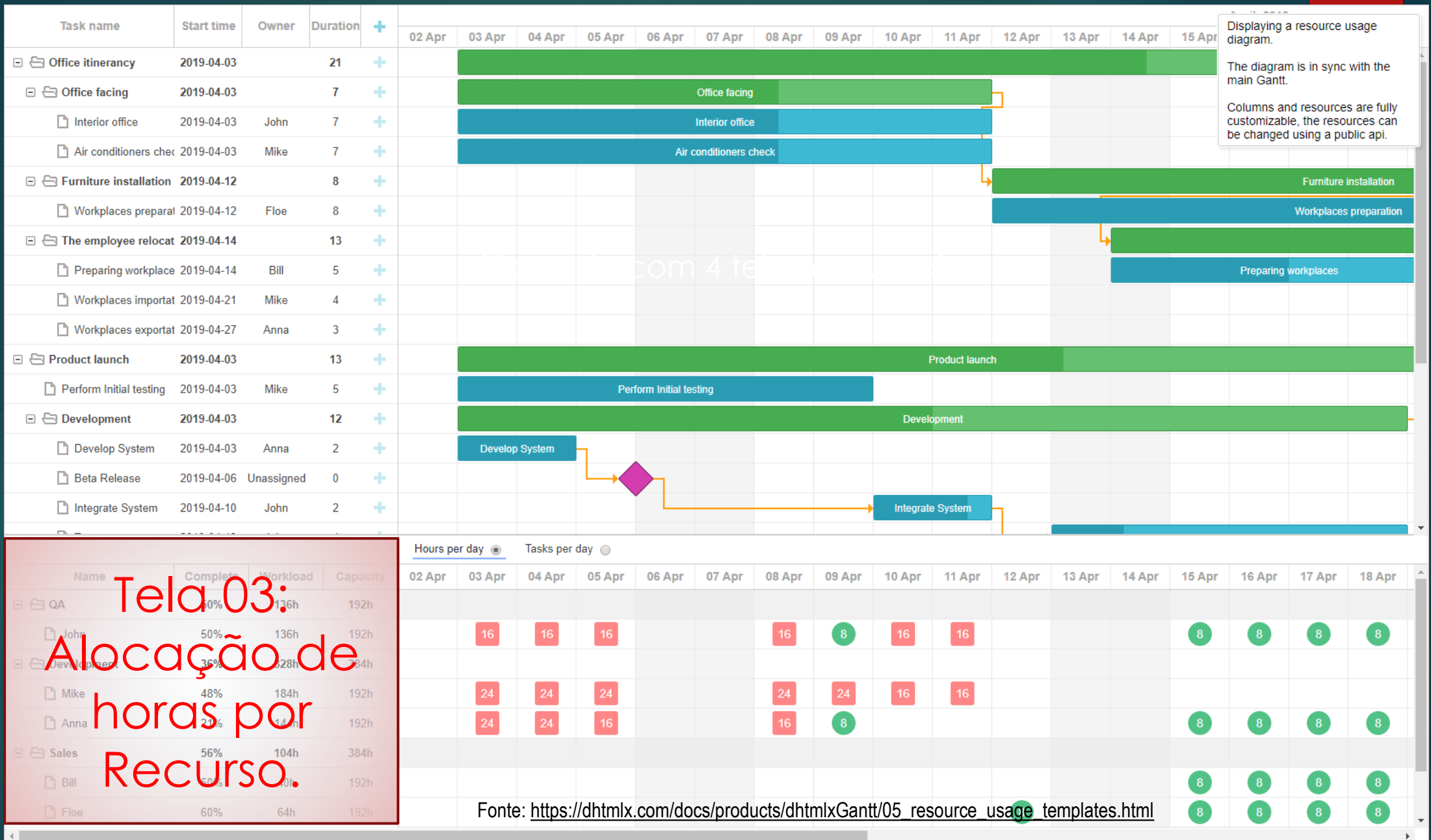
Fonte: [https://dhtmlx.com/docs/products/dhtmlxGantt/05\\_resource\\_usage\\_templates.html](https://dhtmlx.com/docs/products/dhtmlxGantt/05_resource_usage_templates.html)

Fonte: [https://dhtmlx.com/docs/products/dhtmlxGantt/05\\_resource\\_usage\\_templates.html](https://dhtmlx.com/docs/products/dhtmlxGantt/05_resource_usage_templates.html)

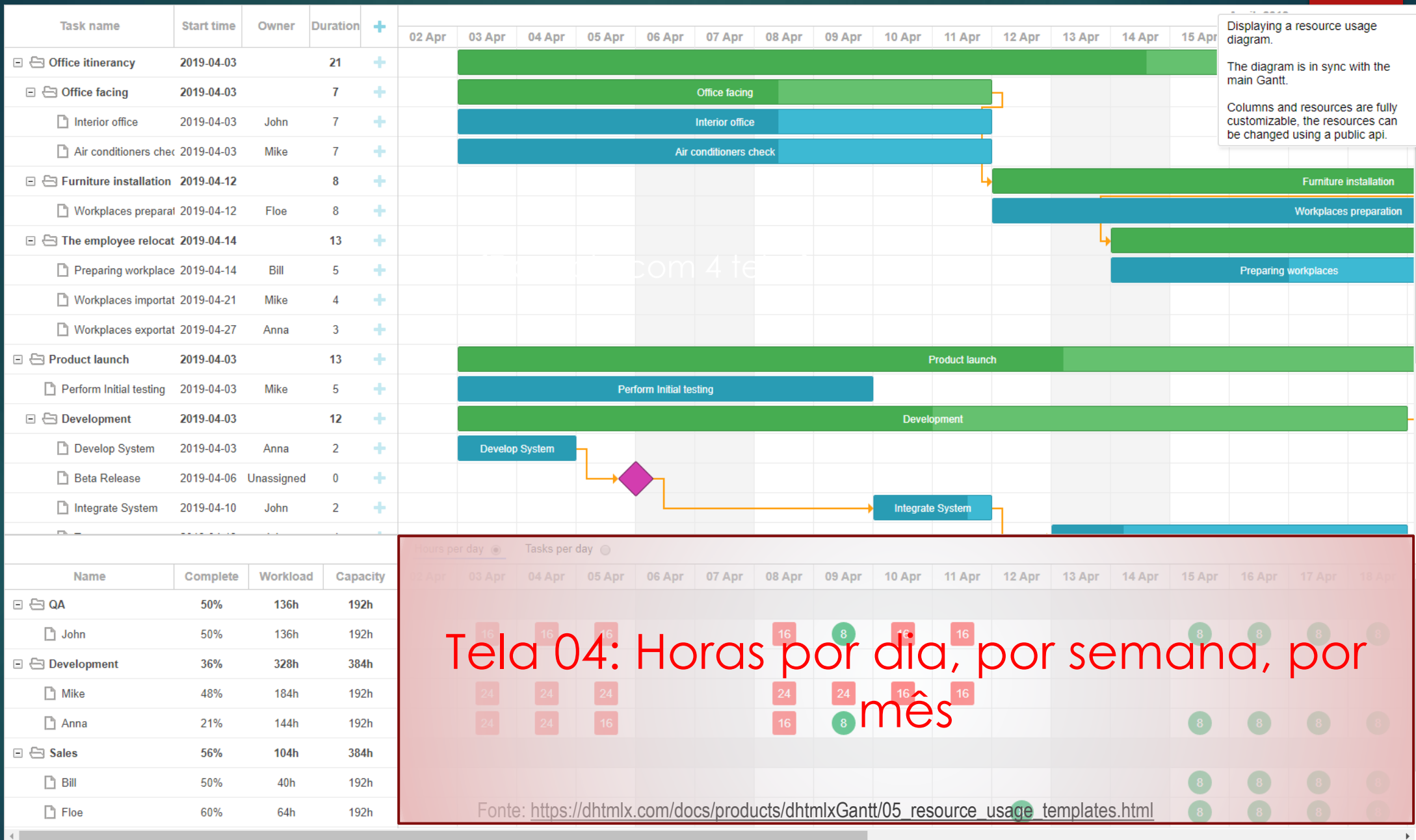


This demo contains a template of the resource usage diagram and shows how tasks are allocated among workers.

Free Trial





























Tela 03:  
Alocação de  
horas por  
Recurso.

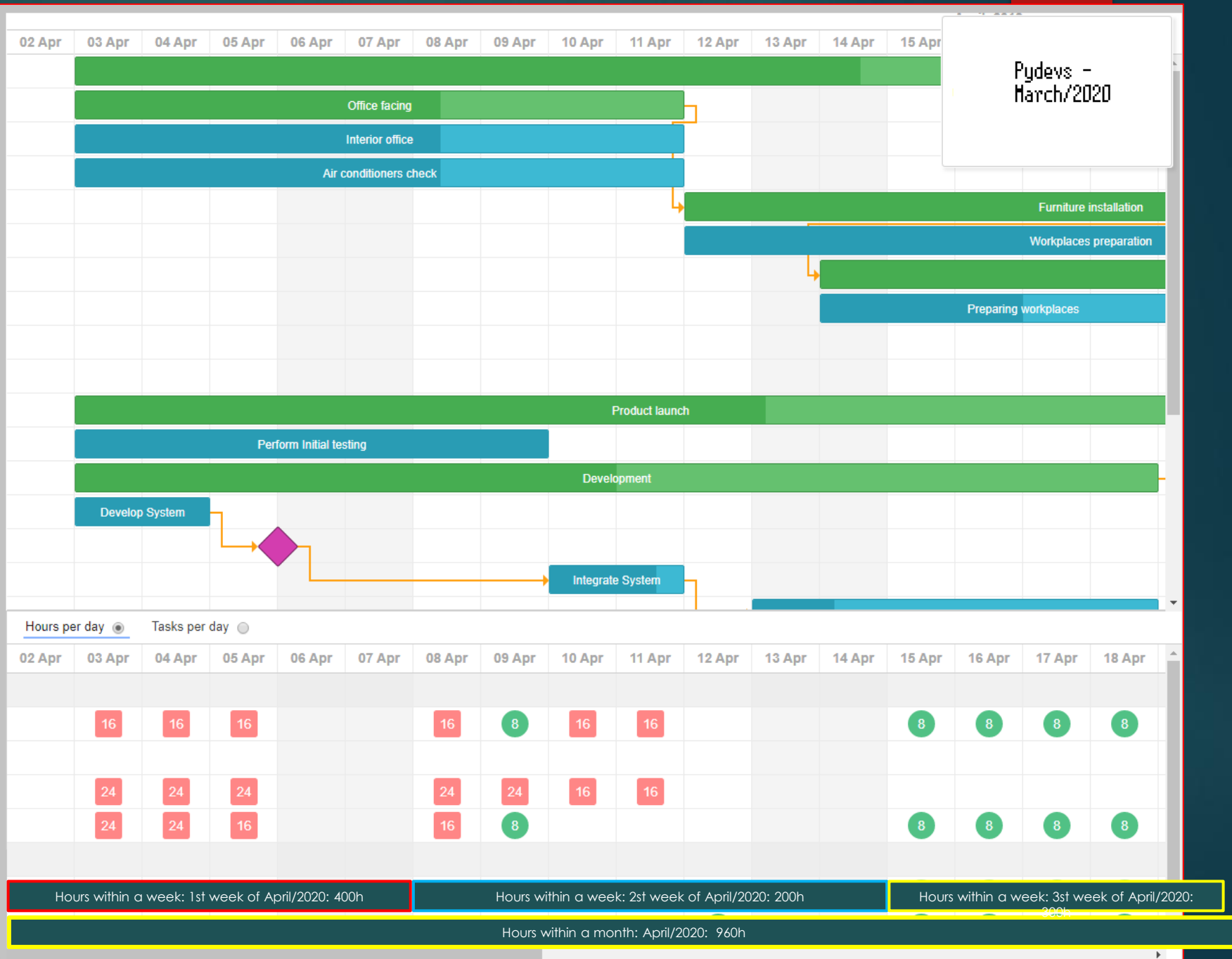


**Visão Futura:** A tela 03 “Alocação de horas por Recurso” e a Tela 02 “Projetos e tarefas na linha do tempo e suas interdependências”, ficariam na parte superior, pela prioridade das informações.

Condicionado à existência de recursos (tempo e força de trabalho), pode-se estabelecer um código de cores p/ sinalizar recursos com muitas horas alocadas, tanto quanto para as unidades de medida na tela 04 (Horas por dia, por semana e por mês, possibilitando reconhecer pessoas e períodos sobrecarregados (portanto, sensíveis ou suscetíveis a alto risco)

Vide diagramas a seguir.

Name	Complete	Workload	Capacity	
 QA	50%	136h	192h	
 John 	50%	136h	192h	
 Development	36%	328h	384h	
 Mike 	48%	184h	192h	
 Anna 	21%	144h	192h	
 Sales	56%	104h	384h	
 Bill 	50%	40h	192h	
 Floe 	60%	64h	192h	
Task name	Start time	Owner	Duration	+
 Office itinerary	2019-04-03		21	+
 Office facing	2019-04-03		7	+
 Interior office	2019-04-03	John	7	+
 Air conditioners check	2019-04-03	Mike	7	+
 Furniture installation	2019-04-12		8	+
 Workplaces preparation	2019-04-12	Floe	8	+
 The employee relocation	2019-04-14		13	+
 Preparing workplace	2019-04-14	Bill	5	+
 Workplaces importation	2019-04-21	Mike	4	+
 Workplaces exportation	2019-04-27	Anna	3	+
 Product launch	2019-04-03		13	+
 Perform Initial testing	2019-04-03	Mike	5	+
 Development	2019-04-03		12	+

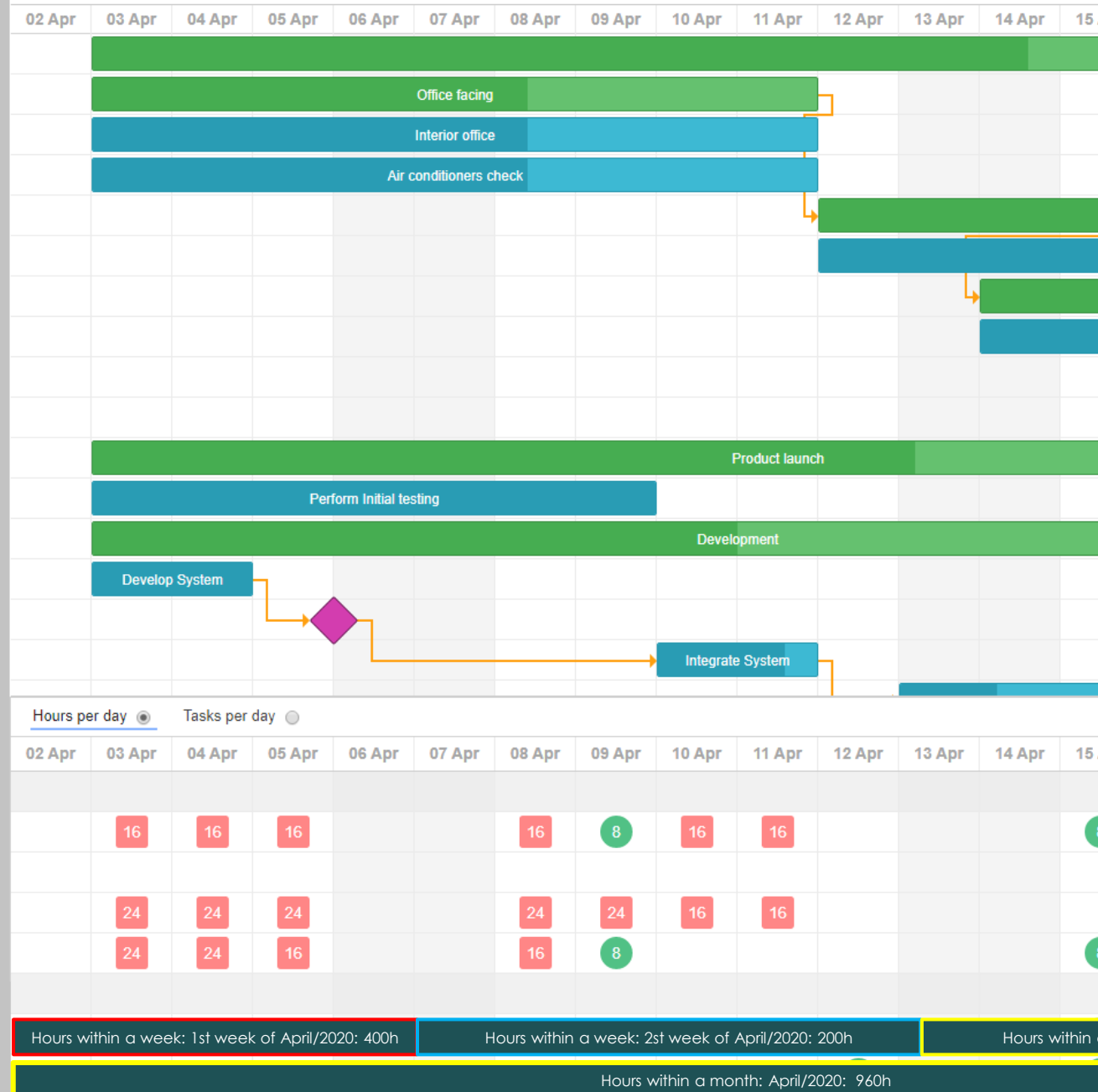


Nome do  
Recurso e Ícone  
colorido

Name	Complete	Workload	Capacity
QA	50%	136h	192h
John	50%	136h	192h
Development	36%	328h	384h
Mike	48%	184h	192h
Anna	21%	144h	192h
Sales	56%	104h	384h
Bill	50%	40h	192h
Floe	60%	64h	192h

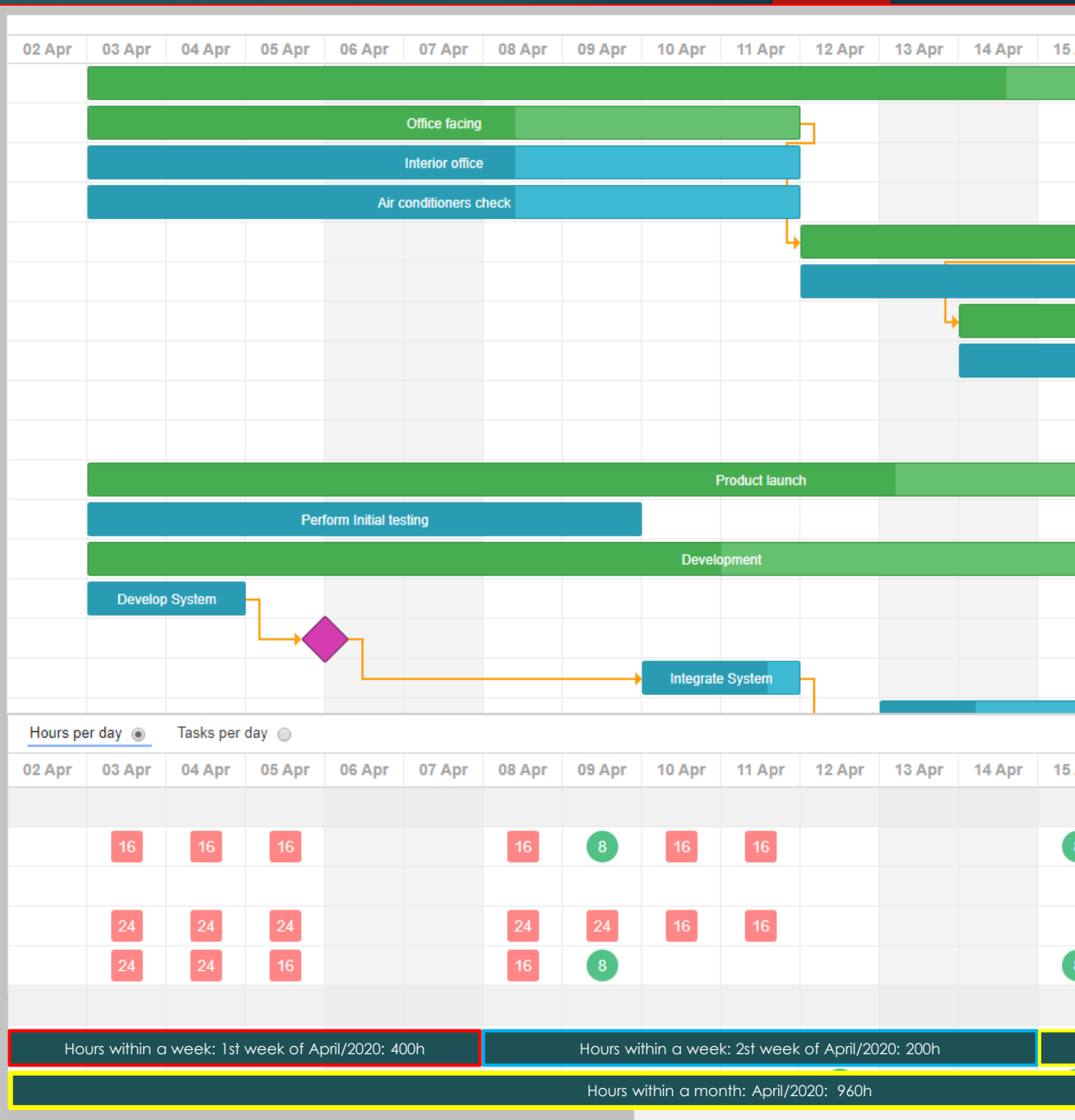
Task name	Start time	Owner	Duration	+
Office itinerary	2019-04-03		21	+
Office facing	2019-04-03		7	+
Interior office	2019-04-03	John	7	+
Air conditioners chec	2019-04-03	Mike	7	+
Furniture installation	2019-04-12		8	+
Workplaces preparat	2019-04-12	Floe	8	+
The employee relocat	2019-04-14		13	+
Preparing workplace	2019-04-14	Bill	5	+
Workplaces importat	2019-04-21	Mike	4	+
Workplaces exportat	2019-04-27	Anna	3	+
Product launch	2019-04-03		13	+
Perform Initial testing	2019-04-03	Mike	5	+
Development	2019-04-03		12	+



# Ocupação do Recurso (código de cores)

Name	Complete	Workload	Capacity
QA	50%	136h	192h
John	50%	136h	192h
Development	36%	328h	384h
Mike	48%	184h	192h
Anna	21%	144h	192h
Sales	56%	104h	384h
Bill	50%	40h	192h
Floe	60%	64h	192h

Task name	Start time	Owner	Duration	+
Office itinerancy	2019-04-03		21	+
Office facing	2019-04-03		7	+
Interior office	2019-04-03	John	7	+
Air conditioners chec	2019-04-03	Mike	7	+
Furniture installation	2019-04-12		8	+
Workplaces preparat	2019-04-12	Floe	8	+
The employee relocat	2019-04-14		13	+
Preparing workplace	2019-04-14	Bill	5	+
Workplaces importat	2019-04-21	Mike	4	+
Workplaces exportat	2019-04-27	Anna	3	+
Product launch	2019-04-03		13	+
Perform Initial testing	2019-04-03	Mike	5	+
Development	2019-04-03		12	+



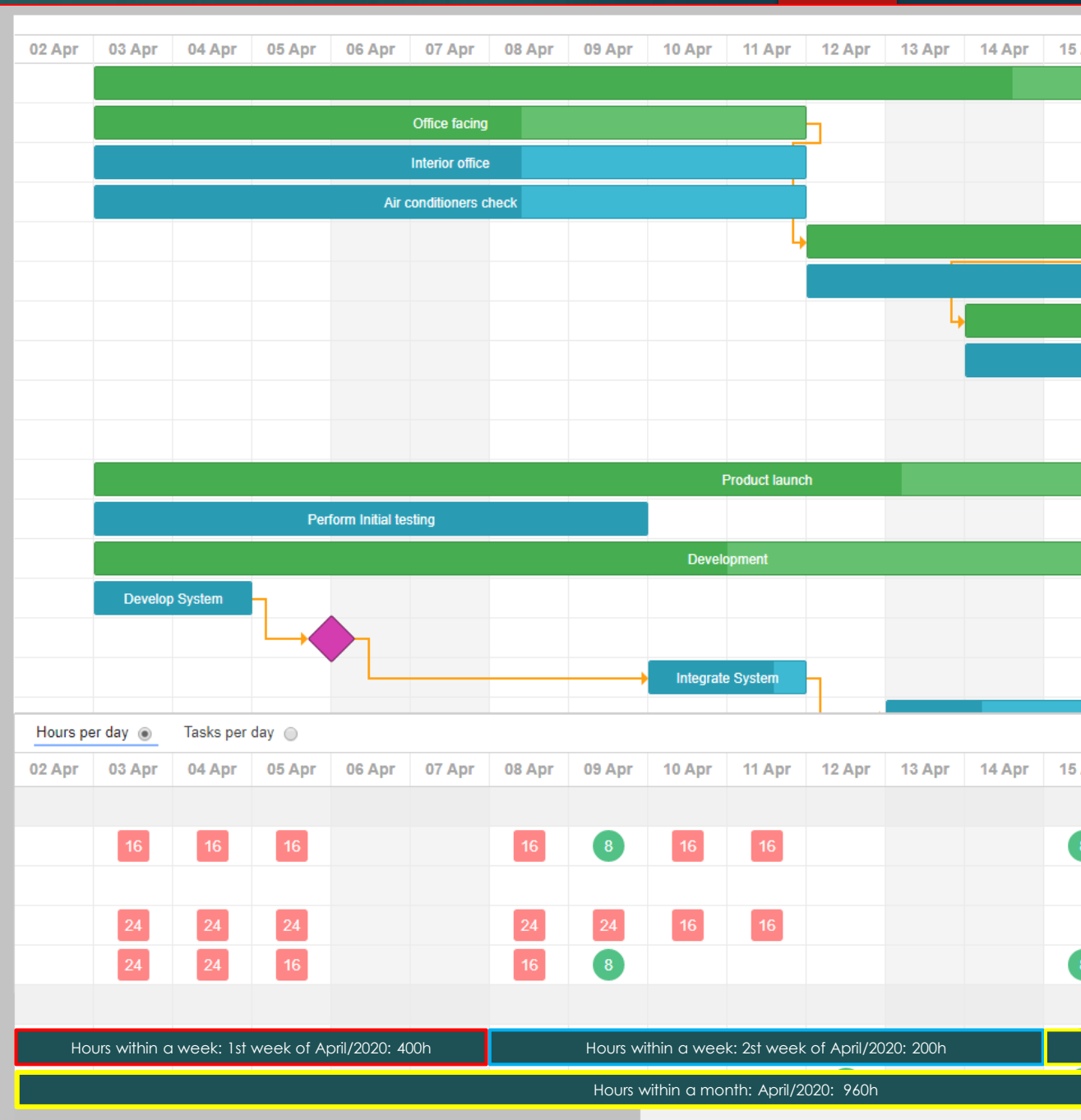


## Ocupação do Recurso em horas (código de cores)

Name	Complete	Workload	Capacity
QA	50%	136h	192h
John	50%	136h	192h
Development	36%	328h	384h
Mike	48%	184h	192h
Anna	21%	144h	192h
Sales	56%	104h	384h
Bill	50%	40h	192h
Floe	60%	64h	192h

Task name	Start time	Owner	Duration	+
Office itinerancy	2019-04-03		21	+
Office facing	2019-04-03		7	+
Interior office	2019-04-03	John	7	+
Air conditioners chec	2019-04-03	Mike	7	+
Furniture installation	2019-04-12		8	+
Workplaces preparat	2019-04-12	Floe	8	+
The employee relocat	2019-04-14		13	+
Preparing workplace	2019-04-14	Bill	5	+
Workplaces importat	2019-04-21	Mike	4	+
Workplaces exportat	2019-04-27	Anna	3	+
Product launch	2019-04-03		13	+
Perform Initial testing	2019-04-03	Mike	5	+
Development	2019-04-03		12	+



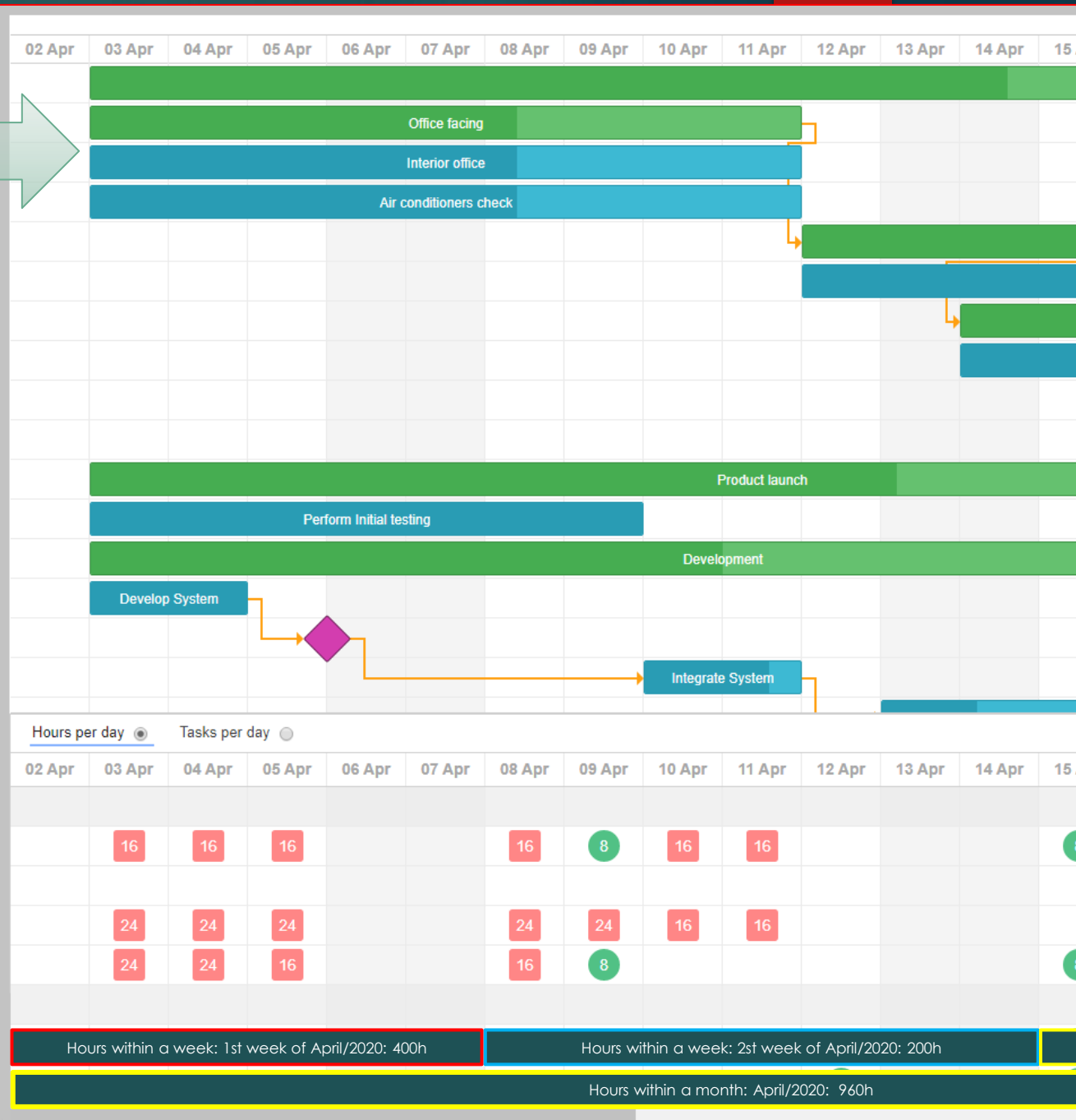


# Projetos e Tarefas na linha do tempo

Name	Complete	Workload	Capacity
QA	50%	136h	192h
John	50%	136h	192h
Development	36%	328h	384h
Mike	48%	184h	192h
Anna	21%	144h	192h
Sales	56%	104h	384h
Bill	50%	40h	192h
Floe	60%	64h	192h

Task name	Start time	Owner	Duration	+
Office itinerary	2019-04-03		21	+
Office facing	2019-04-03		7	+
Interior office	2019-04-03	John	7	+
Air conditioners chec	2019-04-03	Mike	7	+
Furniture installation	2019-04-12		8	+
Workplaces preparat	2019-04-12	Floe	8	+
The employee relocat	2019-04-14		13	+
Preparing workplace	2019-04-14	Bill	5	+
Workplaces importat	2019-04-21	Mike	4	+
Workplaces exportat	2019-04-27	Anna	3	+
Product launch	2019-04-03		13	+
Perform Initial testing	2019-04-03	Mike	5	+
Development	2019-04-03		12	+

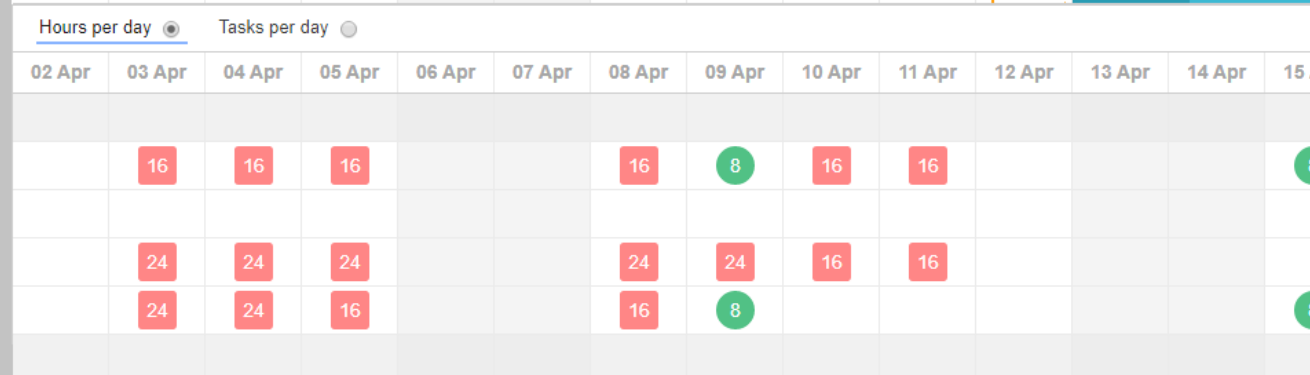
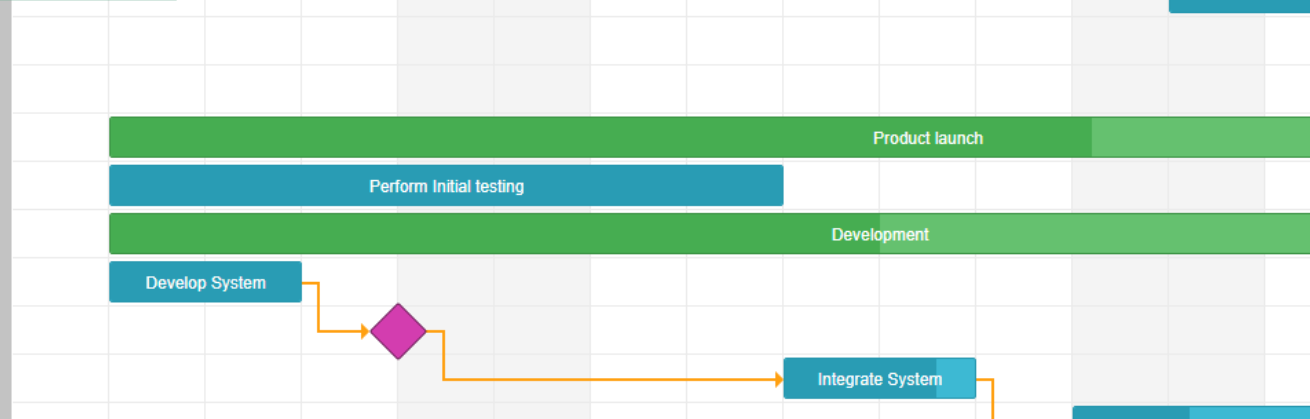
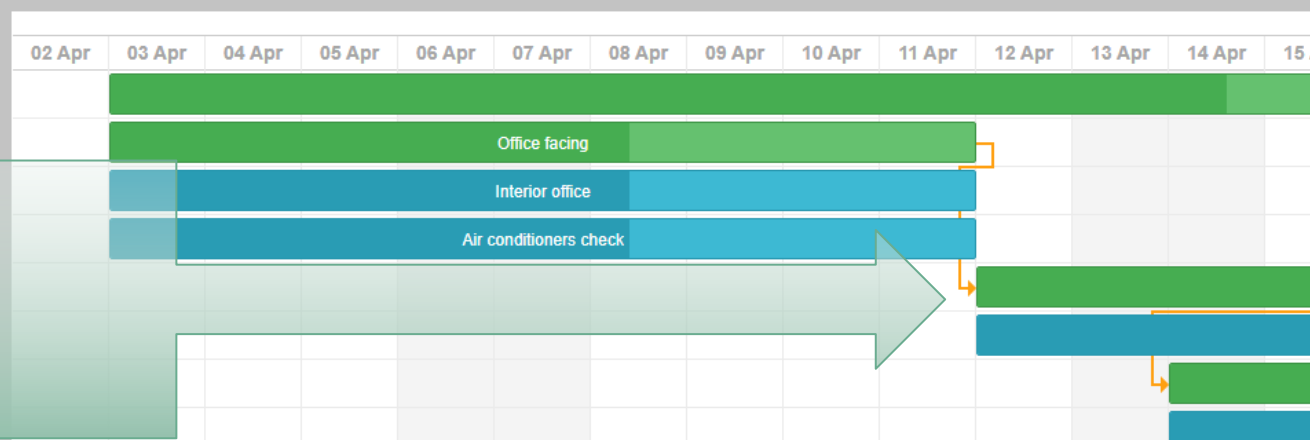


# Tarefas: Interdependência na linha do tempo

Name	Complete	Workload	Capacity
QA	50%	136h	192h
Development	36%	328h	384h
Mike	48%	184h	192h
Anna	21%	184h	192h

Sales	56%	104h	384h
Bill	50%	40h	192h
Floe	60%	64h	192h

Task name	Start time	Owner	Duration	+
Office itinerary	2019-04-03		21	+
Office facing	2019-04-03		7	+
Interior office	2019-04-03	John	7	+
Air conditioners chec	2019-04-03	Mike	7	+
Furniture installation	2019-04-12		8	+
Workplaces preparat	2019-04-12	Floe	8	+
The employee relocat	2019-04-14		13	+
Preparing workplace	2019-04-14	Bill	5	+
Workplaces importat	2019-04-21	Mike	4	+
Workplaces exportat	2019-04-27	Anna	3	+
Product launch	2019-04-03		13	+
Perform Initial testing	2019-04-03	Mike	5	+
Development	2019-04-03		12	+



Hours within a week: 1st week of April/2020: 400h

Hours within a week: 2nd week of April/2020: 200h

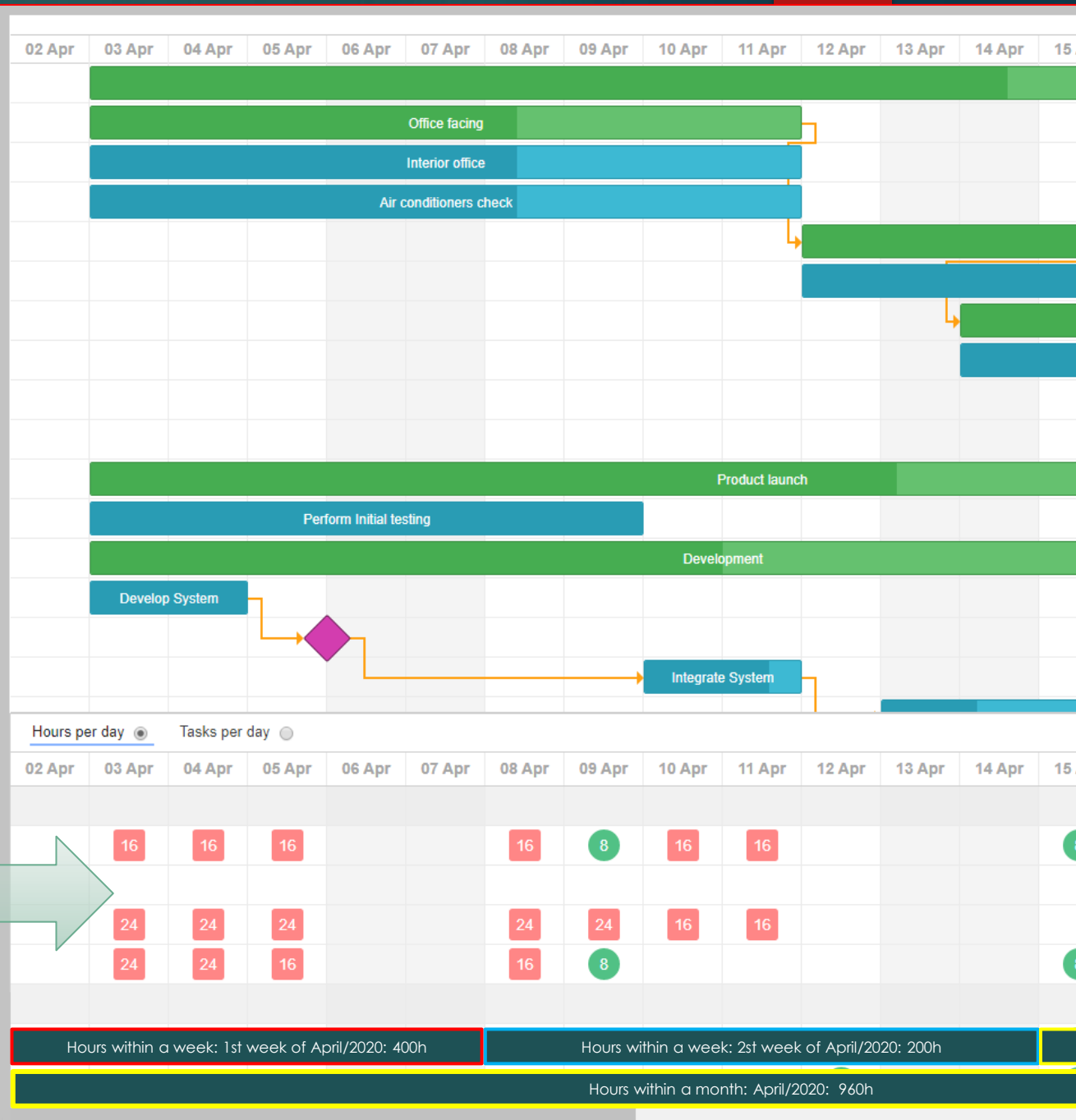
Hours within a month: April/2020: 960h

Horas por unidade de tempo: dias

Name	Complete	Workload	Capacity
QA	50%	136h	192h
John	50%	136h	192h
Development	36%	328h	384h
Mike	48%	184h	192h
Anna	21%	144h	192h
Sales	56%	104h	384h
Bill	50%	40h	192h
Floe	60%	64h	192h

Task name	Start time	Owner	Duration	+
Office itinerancy	2019-04-03		21	+
Office facing	2019-04-03		7	+
Interior office	2019-04-03	John	7	+
Air conditioners chec	2019-04-03	Mike	7	+
Furniture installation	2019-04-12		8	+
Workplaces preparat	2019-04-12	Floe	8	+
Employee relocat	2019-04-14		13	+
Preparing workplace	2019-04-14	Bill	5	+
Workplaces importat	2019-04-21	Mike	4	+
Workplaces exportat	2019-04-27	Anna	3	+
Product launch	2019-04-03		13	+
Perform Initial testing	2019-04-03	Mike	5	+
Development	2019-04-03		12	+

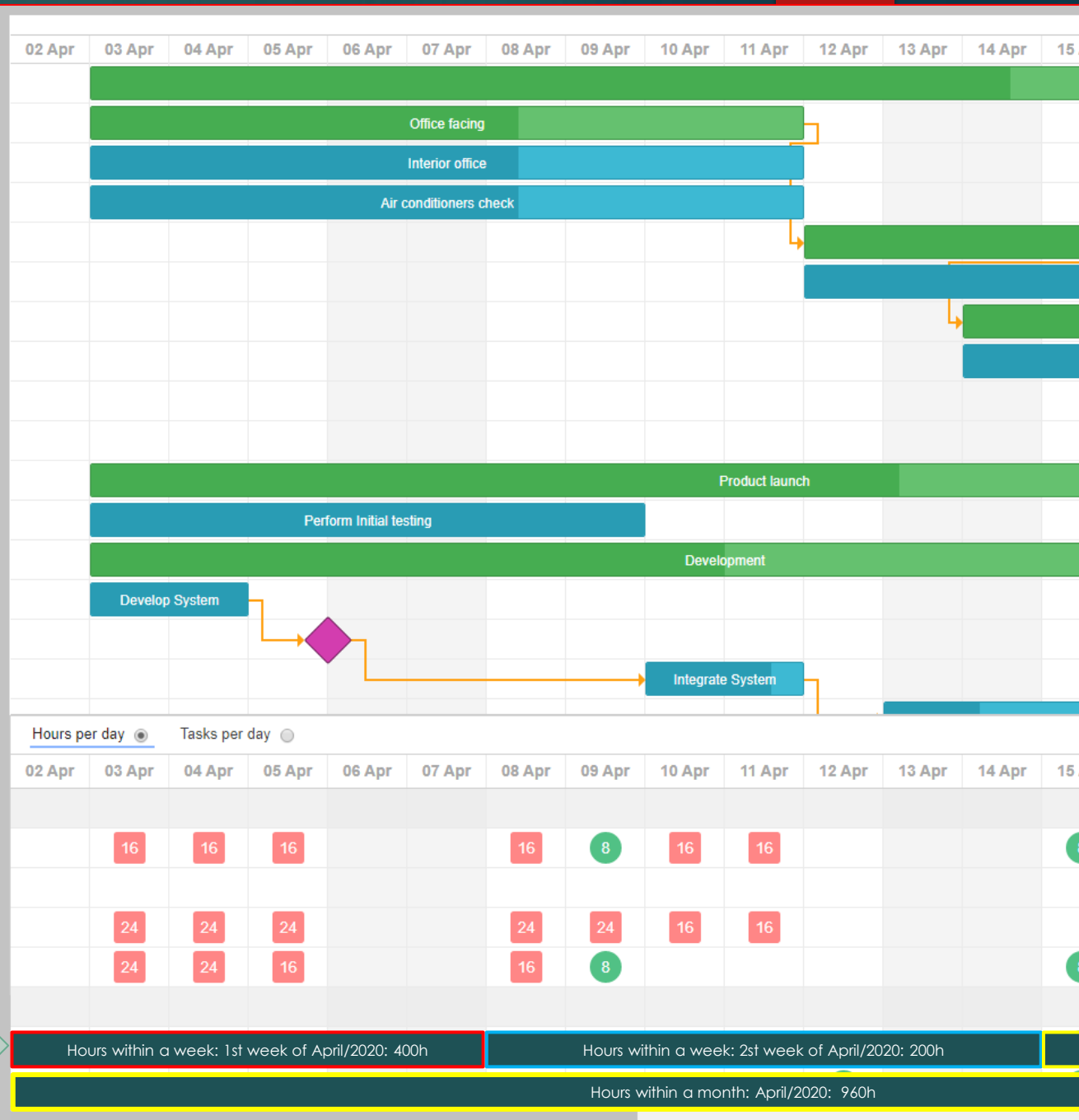


Horas por unidade de tempo: semanas

Name	Complete	Workload	Capacity
QA	50%	136h	192h
John	50%	136h	192h
Development	36%	328h	384h
Mike	48%	184h	192h
Anna	21%	144h	192h
Sales	56%	104h	384h
Bill	50%	40h	192h
Floe	60%	64h	192h

Task name	Start time	Owner	Duration	+
Office itinerancy	2019-04-03		21	+
Office facing	2019-04-03		7	+
Interior office	2019-04-03	John	7	+
Air conditioners chec	2019-04-03	Mike	7	+
Furniture installation	2019-04-12		8	+
Workplaces preparat	2019-04-12	Floe	8	+
The employee relocat	2019-04-14		13	+
Preparing workplace	2019-04-14	Bill	5	+
Workplaces importat	2019-04-21	Mike	4	+
Workplaces exportat	2019-04-27	Anna	3	+
Product launch	2019-04-03		13	+
Perform Initial testing	2019-04-03	Mike	5	+
Development	2019-04-03		12	+

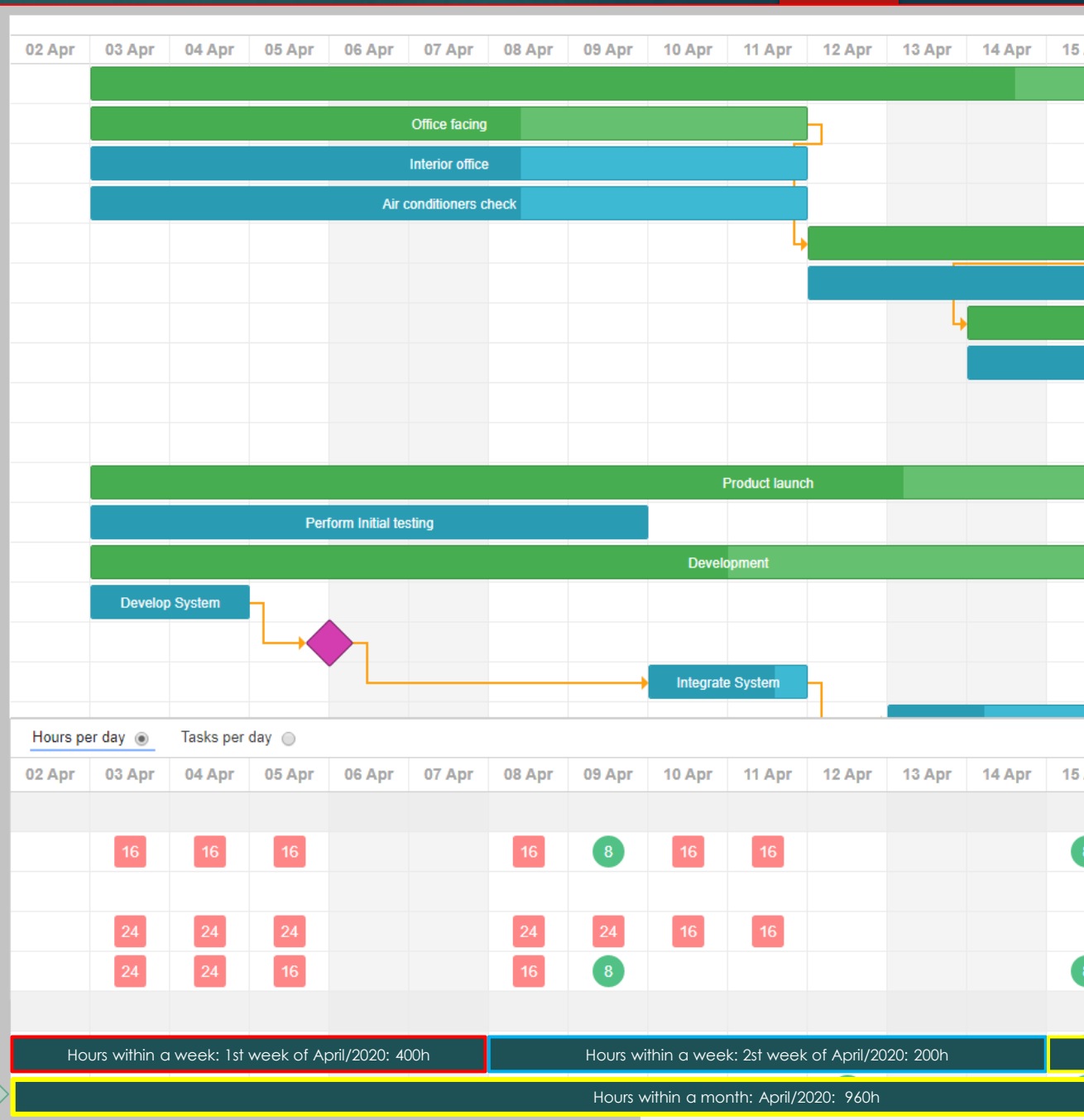


Horas por unidade de tempo: mês

Name	Complete	Workload	Capacity
QA	50%	136h	192h
John	50%	136h	192h
Development	36%	328h	384h
Mike	48%	184h	192h
Anna	21%	144h	192h
Sales	56%	104h	384h
Bill	50%	40h	192h
Floe	60%	64h	192h

Task name	Start time	Owner	Duration	+
Office itinerancy	2019-04-03		21	+
Office facing	2019-04-03		7	+
Interior office	2019-04-03	John	7	+
Air conditioners chec	2019-04-03	Mike	7	+
Furniture installation	2019-04-12		8	+
Workplaces preparat	2019-04-12	Floe	8	+
The employee relocat	2019-04-14		13	+
Preparing workplace	2019-04-14	Bill	5	+
Workplaces importat	2019-04-21	Mike	4	+
Workplaces exportat	2019-04-27	Anna	3	+
Product launch	2019-04-03		13	+
Perform Initial testing	2019-04-03	Mike	5	+
Development	2019-04-03		12	+

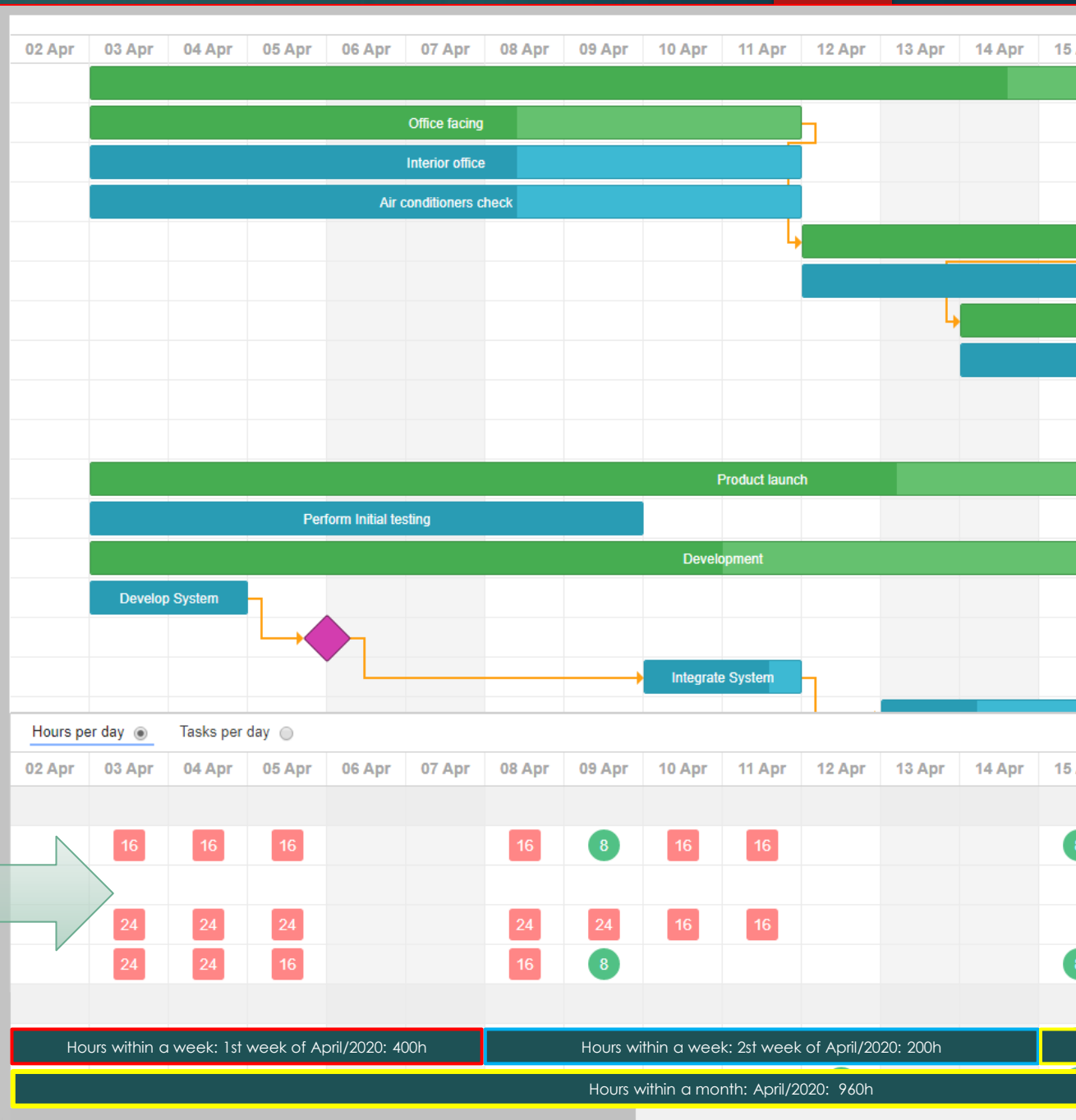


Horas por unidade de tempo: código de cores

Name	Complete	Workload	Capacity
QA	50%	136h	192h
John	50%	136h	192h
Development	36%	328h	384h
Mike	48%	184h	192h
Anna	21%	144h	192h
Sales	56%	104h	384h
Bill	50%	40h	192h
Floe	60%	64h	192h


















Task name	Start time	Owner	Duration	+
Office itinerancy	2019-04-03		21	+
Office facing	2019-04-03		7	+
Interior office	2019-04-03	John	7	+
Air conditioners chec	2019-04-03	Mike	7	+
Furniture installation	2019-04-12		8	+
Workplaces preparat	2019-04-12	Floe	8	+
Employee relocat	2019-04-14		13	+
Preparing workplace	2019-04-14	Bill	5	+
Workplaces importat	2019-04-21	Mike	4	+
Workplaces exportat	2019-04-27	Anna	3	+
Product launch	2019-04-03		13	+
Perform Initial testing	2019-04-03	Mike	5	+
Development	2019-04-03		12	+

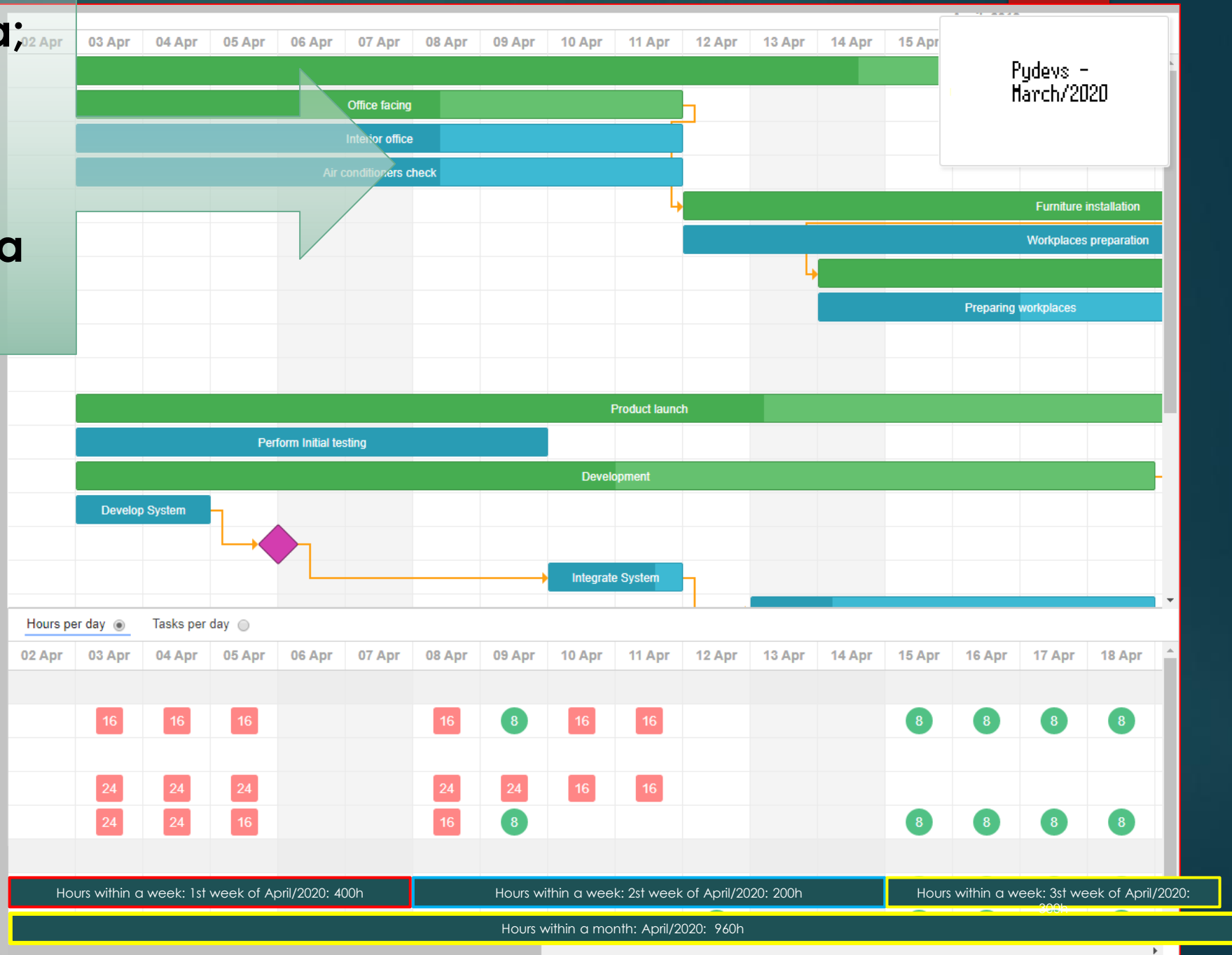


## Visão Futura: Funcionalidades e experiência do usuário

Vide diagramas a seguir.

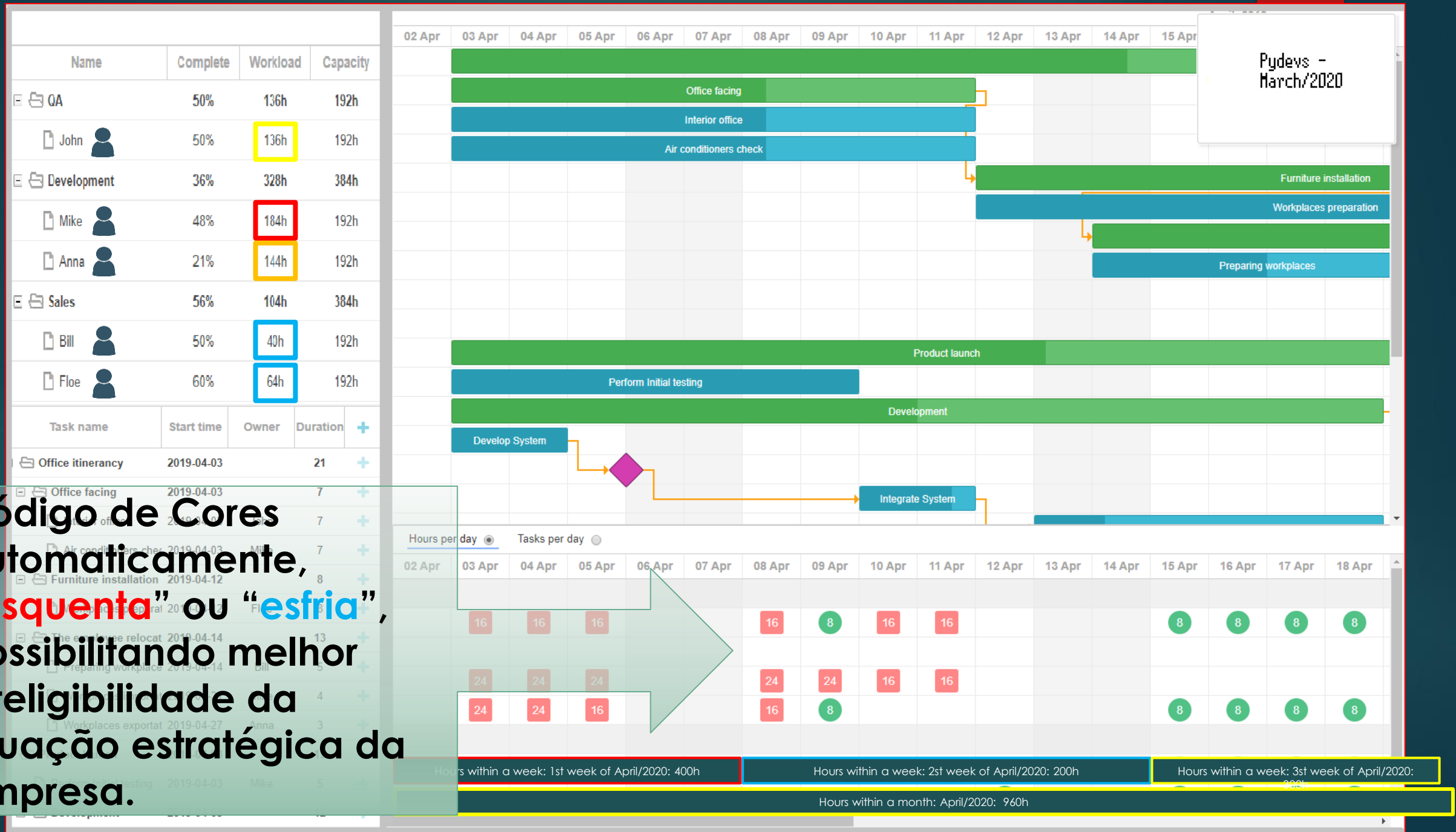
- Mouse: clica e arrasta;
- Usuário: Fornece o nome do Recurso e Interdependência;
- Adição na tela 1, Tela 03 e Tela 04;

 Bill		50%	40h	192h
 Floe		60%	64h	192h
Task name	Start time	Owner	Duration	+
 Office itinerary	2019-04-03		21	+
 Office facing	2019-04-03		7	+
 Interior office	2019-04-03	John	7	+
 Air conditioners chec	2019-04-03	Mike	7	+
 Furniture installation	2019-04-12		8	+
 Workplaces preparat	2019-04-12	Floe	8	+
 The employee relocat	2019-04-14		13	+
 Preparing workplace	2019-04-14	Bill	5	+
 Workplaces importat	2019-04-21	Mike	4	+
 Workplaces exportat	2019-04-27	Anna	3	+
 Product launch	2019-04-03		13	+
 Perform Initial testing	2019-04-03	Mike	5	+
 Development	2019-04-03		12	+





Código de Cores automaticamente, “esquenta” ou “esfria”, possibilitando melhor inteligibilidade da situação estratégica da empresa.



## Visão Futura:

### Ambiente Tecnológico

Nessa fase do projeto (pensar), Pydevs está testando diversas linguagens / bibliotecas, e seguindo padrões da Engenharia de Software.

No momento, temos:

- Linguagem de Programação: Java (migrando do Python);
- Camadas de HTML, json, Javascript são esperadas; (...)

## Visão Futura:

### Ambiente Tecnológico

(...)

- **Aplicação Desktop (viabilidade de versão web está sendo estudada);**
- **Banco de dados ainda não definido;**
- **Modelagem inicial do BD: Rascunho versão 01 concluída;**

# Repositório Github:

<https://github.com/pydevelopers/pydevs>

## Equipe Pydevs

Caroline Paz (dev)

Denise de Oliveira (sm)

Fabio Odaguiri (po)

Wilson Amore (dev)

### Feedback:

Fabio Odaguiri LL.M.

Product Owner Pydevs

Slack: "pydevs-fatec.slack.com"

Whatsapp: (11) 9 4109-3720

fabio.odaguiri@fatec.sp.gov.br

Hours within a week: 1st week of April/2020: 400h

Hours within a week: 2nd week of April/2020: 200h

Hours within a week: 3rd week of April/2020: 200h

Hours within a month: April/2020: 960h