



RANU INDICADORES

Grupo 2:

- Lara Vaz (A88362)
- Mariana Carvalho (A88360)
- Tiago Novais (A88397)

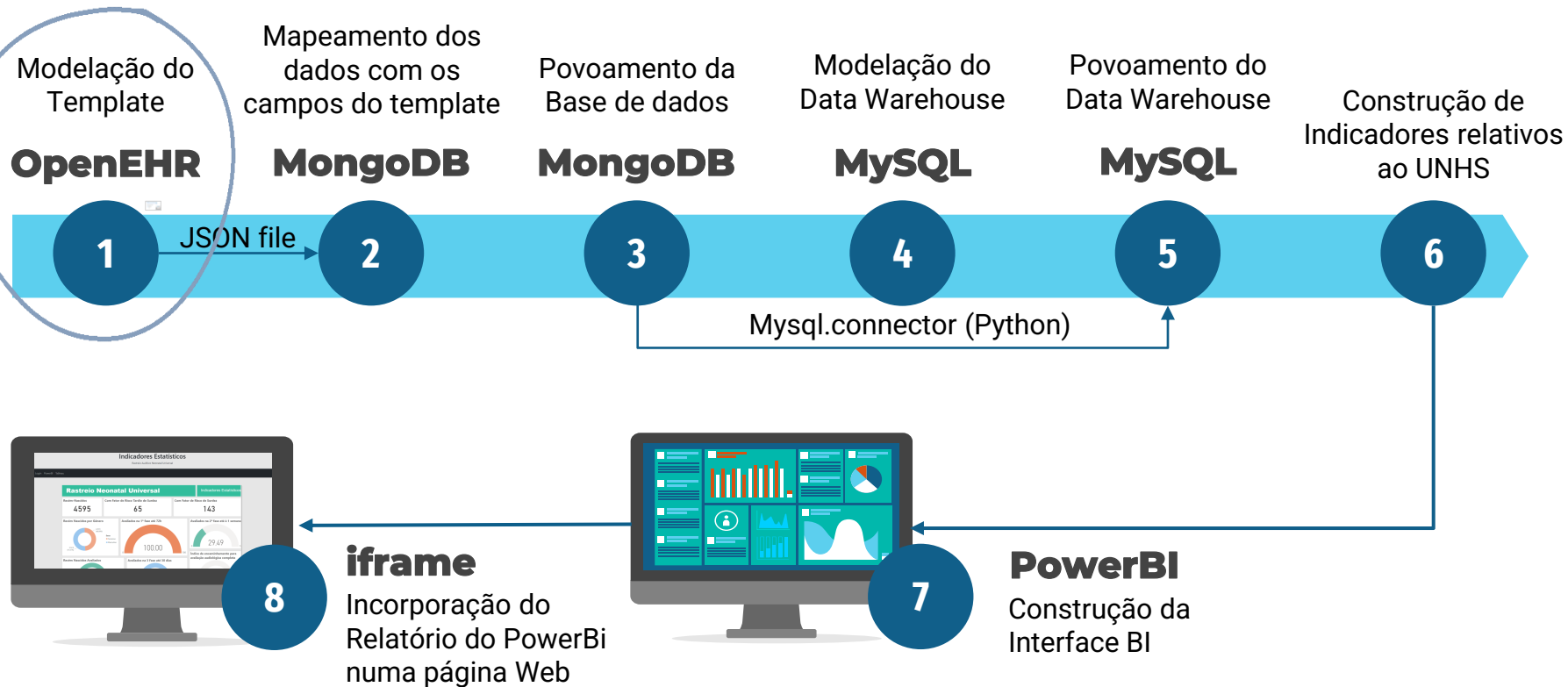
Braga
9 de junho de 2022

FERRAMENTAS DE BI







- ✓ Transformação de **dados** em **análises**, **relatórios**, **gráficos**, entre outros;
- ✓ Fornecimento de uma **visão geral** e detalhada do desempenho de um negócio, instituição ou serviço
- ✓ Construção de **dashboards**

PIPELINE DO PROJETO




MODELAÇÃO DO TEMPLATE

[-]  Universal Newborn Hearing Screening *NAME (from: 'Encounter')*   

⊕ → context

[-] → content

⊕  Birth Registration RANU

⊕  Deafness Risk Factors in Newborn *NAME (from: 'health_risk_lara_copy')*

⊕  Apgar Score *NAME (from: 'apgar_ranu')*

⊕  Phase 1 *NAME (from: 'phase')*

⊕  Phase 2 *NAME (from: 'phase')*

⊕  Phase 3 *NAME (from: 'phase')*



MODELAÇÃO DO TEMPLATE

Birth Registration RANU

→ data

Pregnancy

Pregnancy Duration $\Delta [0..1]$ to $[1..1]$

Puerperium $\Delta [0..1]$ to $[1..1]$

Childbirth

Place of Birth Category $\Delta [0..1]$ to $[1..1]$

Newborn

Date/Time of Birth $\Delta [0..1]$ to $[1..1]$

Sex $\Delta [0..1]$ to $[1..1]$

Birthweight $\Delta [0..1]$ to $[1..1]$

Deafness Risk Factors in Newborn *NAME (from: 'health_risk_lara_copy')*

→ data

Risk factors

Risk factor

screening date $\Delta [0..1]$ to $[1..1]$

risk $\Delta [0..1]$ to $[1..1]$

→ protocol

evaluator ID $\Delta [0..1]$ to $[1..1]$

MODELAÇÃO DO TEMPLATE

☐ 👁 Apgar Score *NAME (from: 'apgar_ranu')*

☐ → data

☐ 🎯 1 minute Δ *Values changed*

☐ → data

¹₂₃ Total Δ [0..1] to [1..1]

☐ 🎯 5 minute Δ *Values changed*

☐ → data

¹₂₃ Total Δ [0..1] to [1..1]

☐ → protocol

☐ 🔄 Phase 1 *NAME (from: 'phase')*

☐ → data

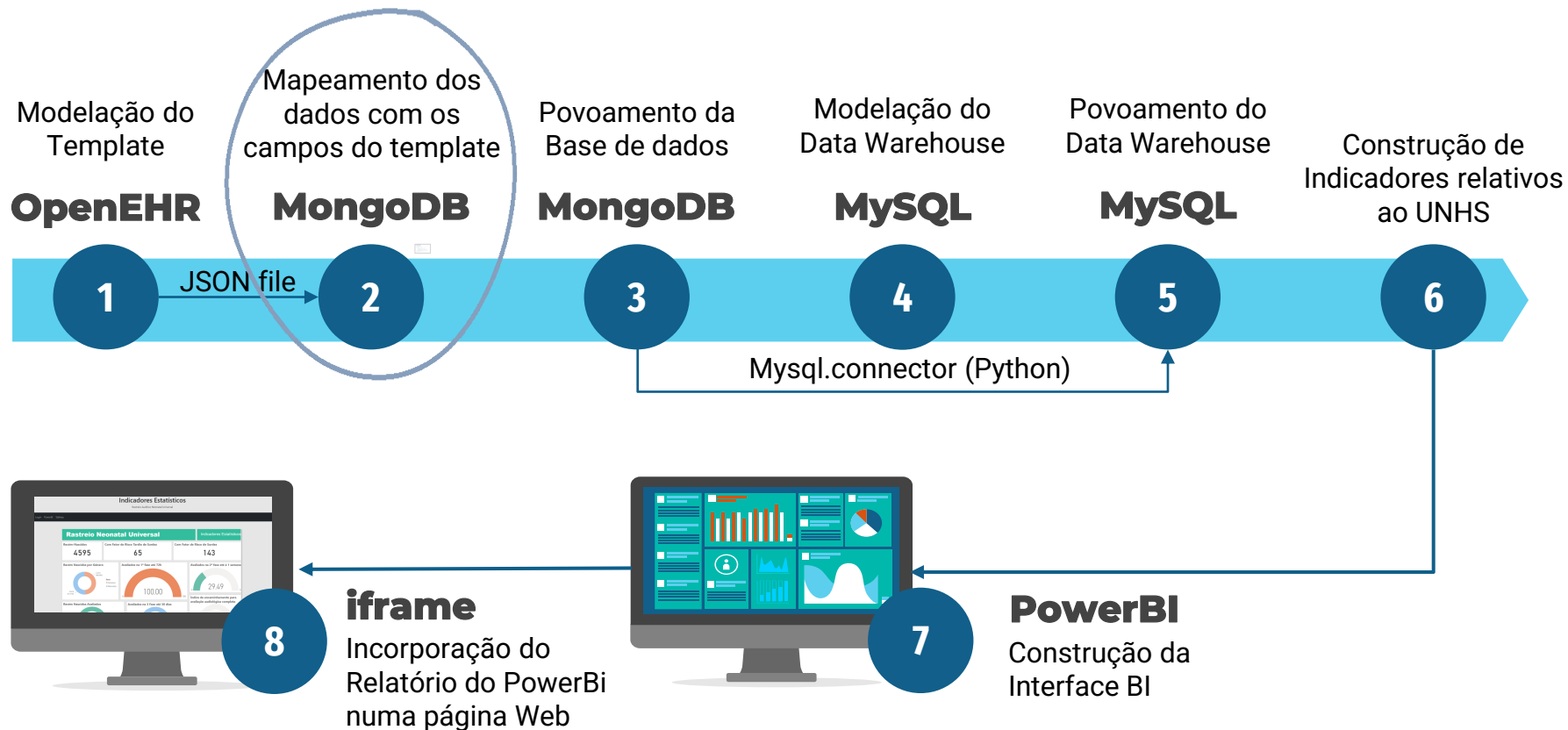
¹₂₃ evaluation Δ [0..1] to [1..1]

¹ evaluation date Δ [0..1] to [1..1]

☐ → protocol

¹ evaluator ID Δ [0..1] to [1..1]

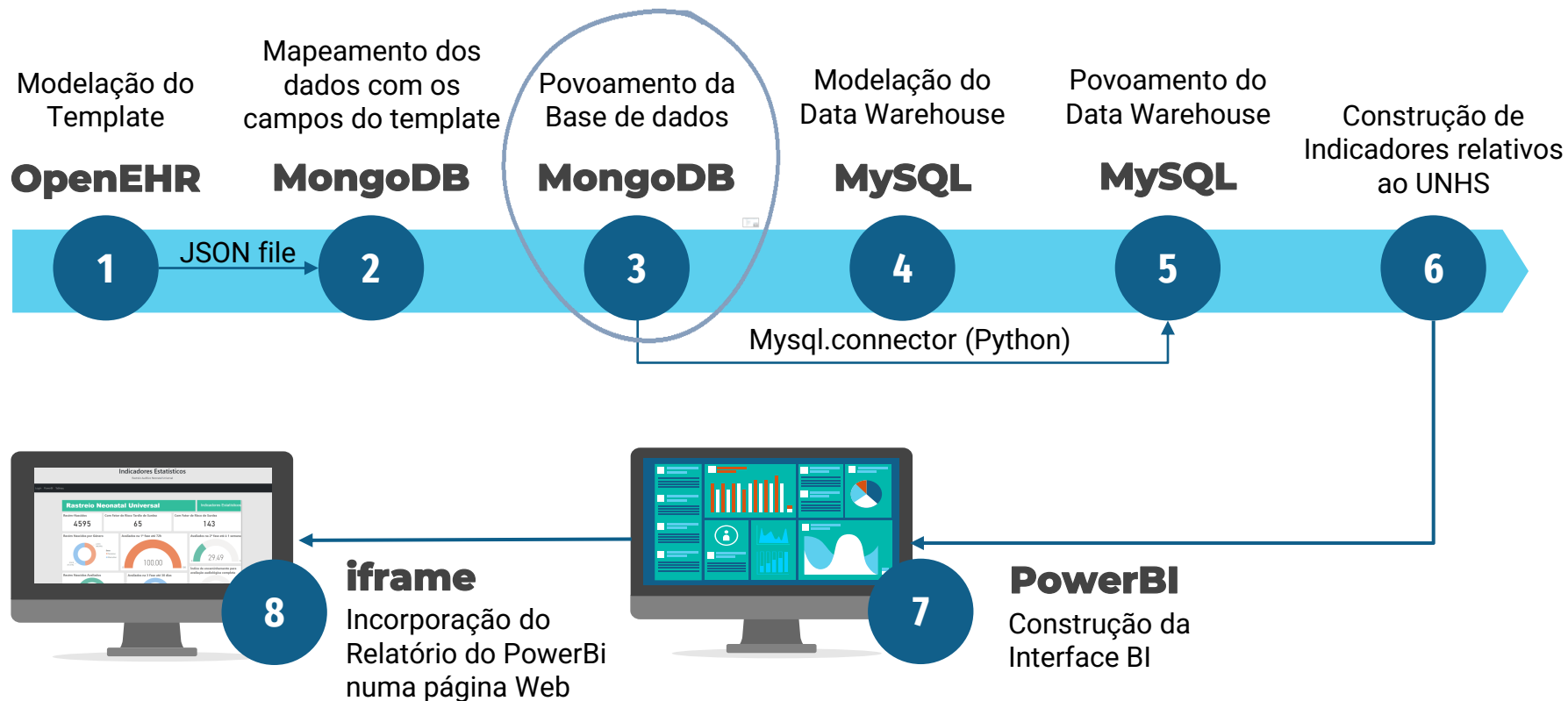
PIPELINE DO PROJETO



MAPEAMENTO

```
_id: ObjectId('629f2e0fbb0356fa995ea15c')
  v Universal Newborn Hearing Screening: Object
    v content: Object
      v Birth Registration RANU: Object
        v data: Object
          v Pregnancy: Object
            Pregnancy Duration: "/content[openEHR-EHR-EVALUATION.pregnancy_summary_ranu.v0]/data[at0001..."
            Puerperium: "/content[openEHR-EHR-EVALUATION.pregnancy_summary_ranu.v0]/data[at0001..."
          v Childbirth: Object
            Place of Birth Category: "/content[openEHR-EHR-EVALUATION.pregnancy_summary_ranu.v0]/data[at0001..."
          v Newborn: Object
            Date/Time of Birth: "/content[openEHR-EHR-EVALUATION.pregnancy_summary_ranu.v0]/data[at0001..."
            Sex: "/content[openEHR-EHR-EVALUATION.pregnancy_summary_ranu.v0]/data[at0001..."
            Birthweight: "/content[openEHR-EHR-EVALUATION.pregnancy_summary_ranu.v0]/data[at0001..."
        v protocol: Object
          Patient ID: "/content[openEHR-EHR-EVALUATION.pregnancy_summary_ranu.v0]/protocol[at..."
          Process ID: "/content[openEHR-EHR-EVALUATION.pregnancy_summary_ranu.v0]/protocol[at..."
    > Deafness Risk Factor in Newborn: Object
    > Apgar Score: Object
    > Phase 1: Object
    > Phase 2: Object
    > Phase 3: Object
```


PIPELINE DO PROJETO

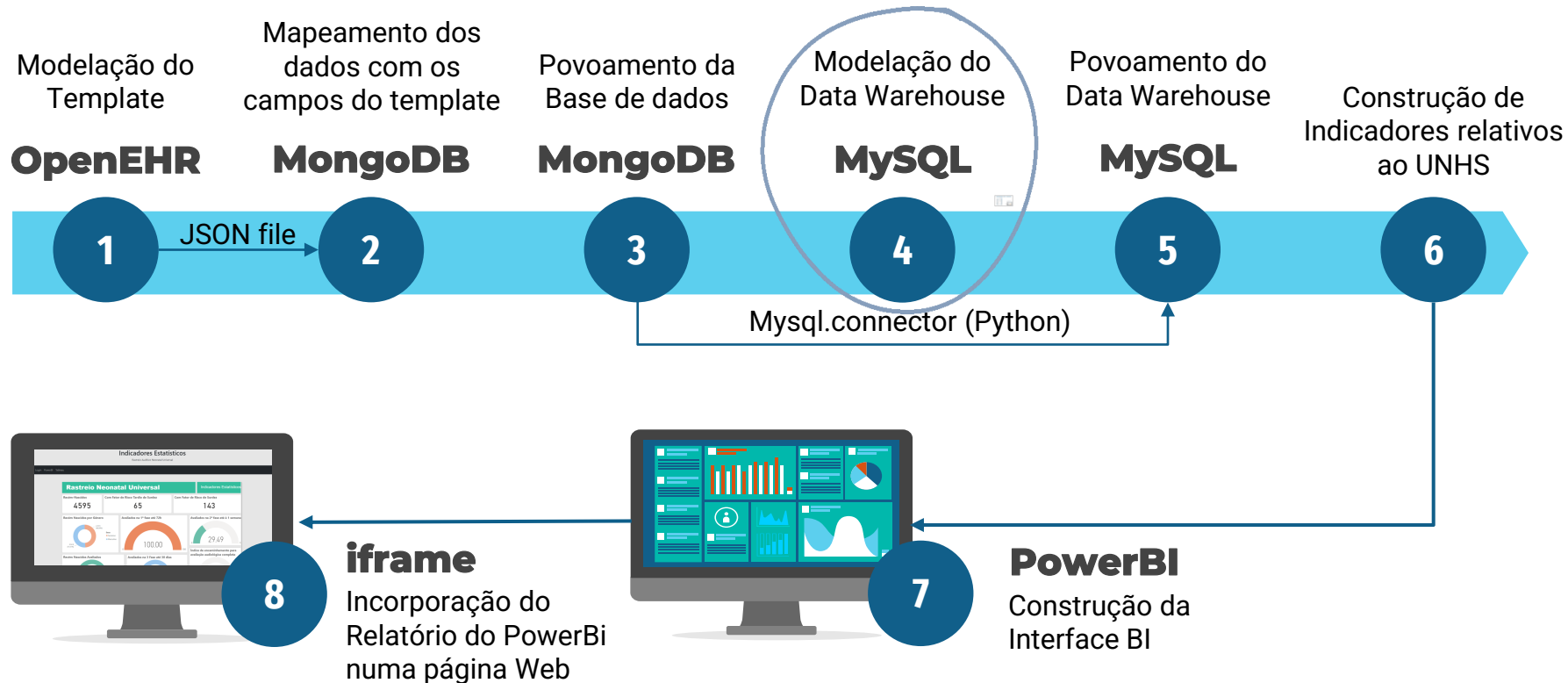


POVOAMENTO DA BASE DE DADOS

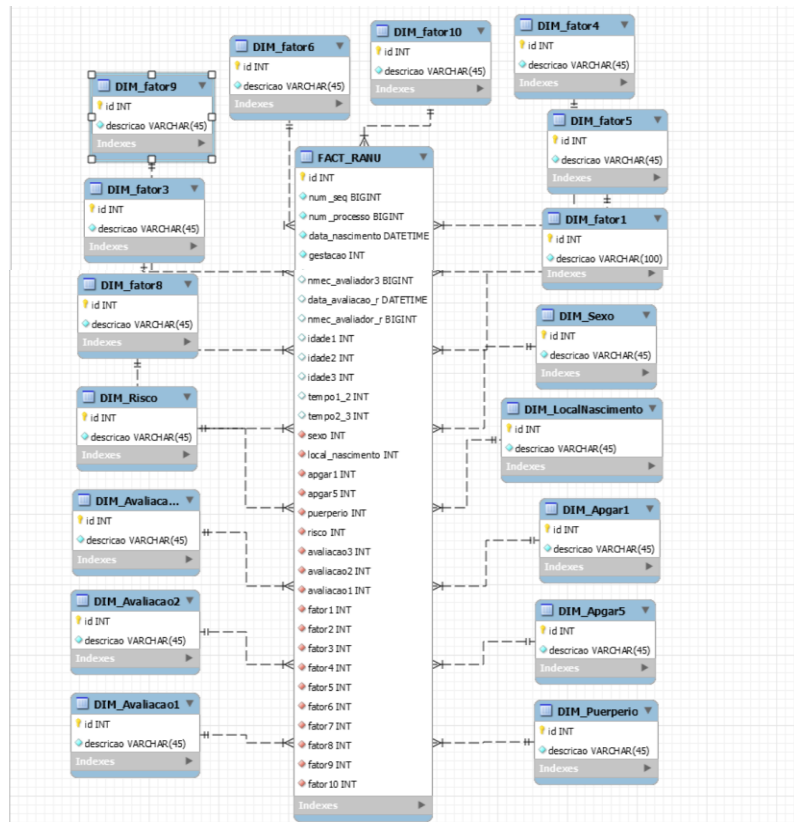
```
_id: ObjectId('629f2516cd07e8f91e4d8c10')
  Birth Registration RANU: Object
    data: Object
      Pregnancy: Object
        Pregnancy Duration: "41"
      Puerperium: Object
        terminology_id: "at0242"
        code_string: "Normal"
      Childbirth: Object
        Place of Birth Category: Object
          terminology_id: "at0120"
          code_string: "Internal"
      Newborn: Object
        Date/Time of Birth: "05/02/2020 23:29:00"
        Sex: Object
          terminology_id: "at0114"
          code_string: "Female"
        Birthweight: Object
          magnitude: "3155"
          units: "g"
      > protocol: Object
    > Apgar Score: Object
    > phase 1: Object
    > phase 2: Object
    phase 3: null
  Deafness Risk Factors in Newborn: Object
```



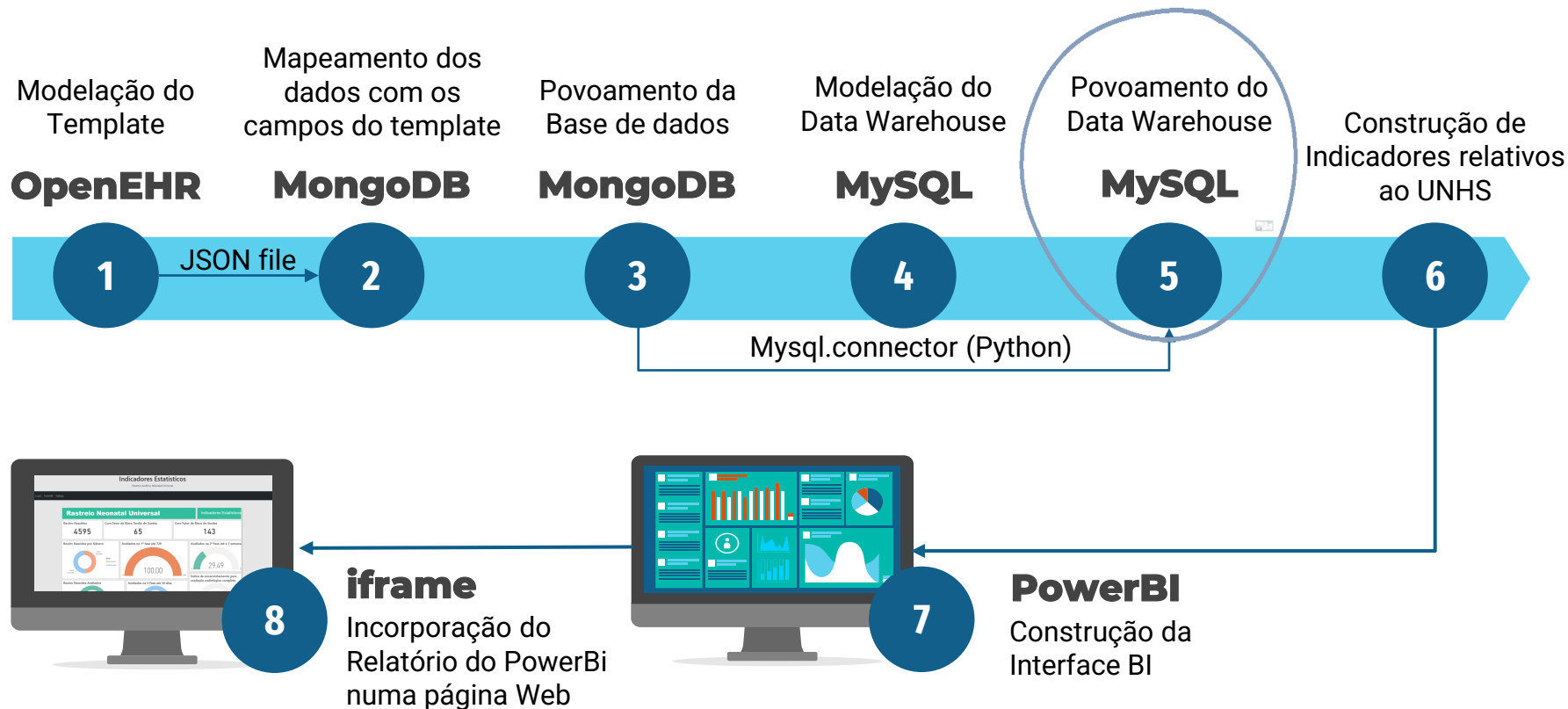
PIPELINE DO PROJETO



MODELAÇÃO DO DATA WAREHOUSE



PIPELINE DO PROJETO



POVOAMENTO DAS TABELAS DE DIMENSÕES

Tabela do Sexo

	id	descricao
▶	1	Unknown
	2	Female
	3	Male

Tabela do Fator de Risco de Surdez 1

	id	descricao
▶	1	Family history of congenital sensorineural heari...
	2	No risk factor

Tabela do Apgar1

	id	descricao
▶	1	Unknown
	2	0
	3	1
	4	2
	5	3
	6	4
	7	5
	8	6
	9	7
	10	8
	11	9
	12	10



POVOAMENTO DO DATA WAREHOUSE

```
PS C:\Users\user\Desktop\MIEB_4\Semestre2\PCE\TP2> python sqlimp.py
```



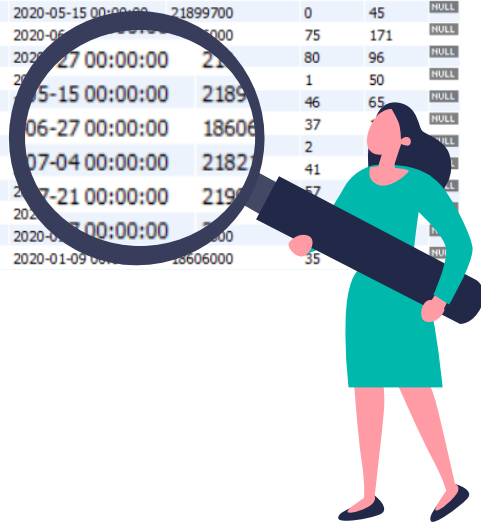
POVOAMENTO DO DATA WAREHOUSE

```
0 risk factor', 'No risk factor', 'Otolotoxic medication', 'No risk factor', 'No risk factor', 'No risk factor', 'No risk factor')  
PROGRESSO: 4594/4595  
Normal  
( '152817177', '4203077177', '2021-12-23T01:29:00', 38, 3770, '2022-01-07T00:00:00', '21899700', '0001-01-01T00:00:00', 0, '0001-01-01T00:0  
054800', 14, 0, 0, 0, 0, 'Male', 'Internal', '9', '1', 'Normal', 'Only risk factors', 'Unknown', 'Unknown', 'Pass', 'No risk factor', 'No  
risk factor', 'No risk factor', 'No risk factor', 'No risk factor', 'Apgar at 1 minute and at 5 min', 'No risk factor', 'No risk factor')  
PROGRESSO: 4595/4595
```

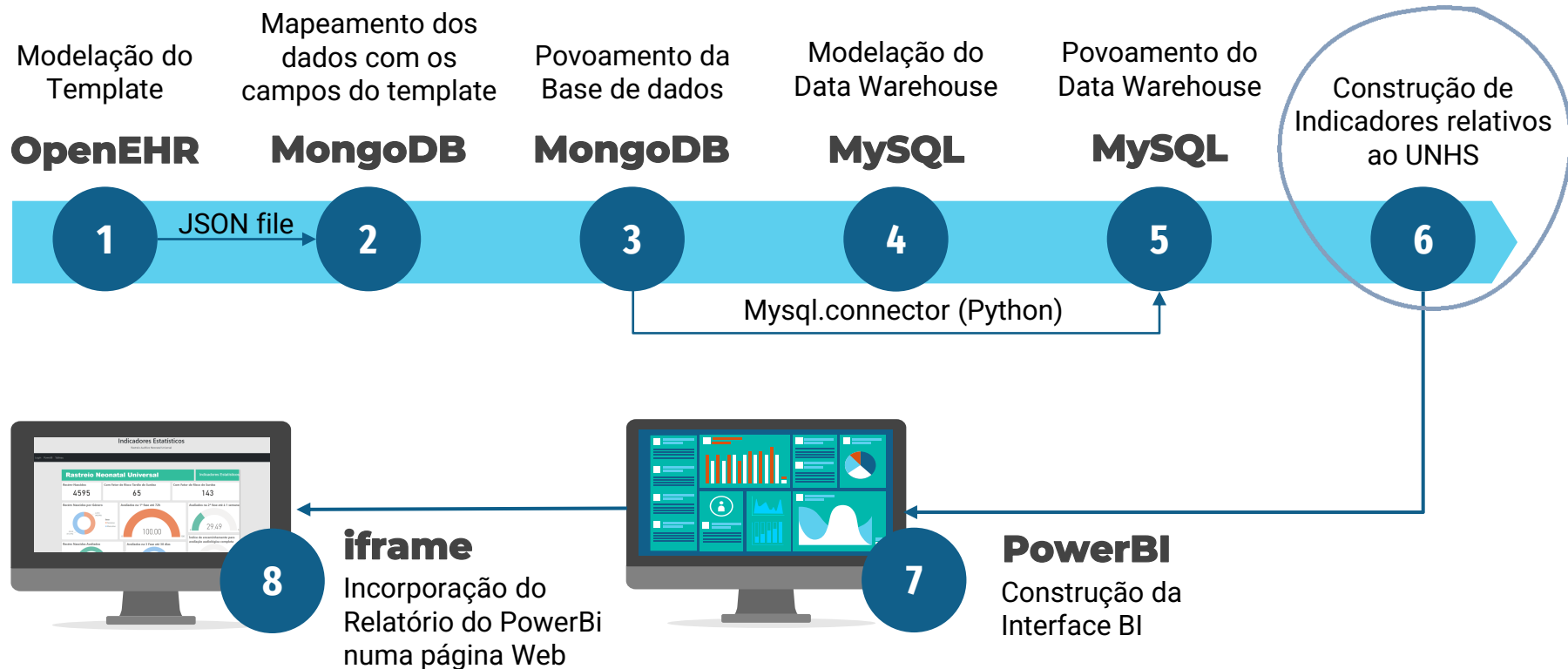


POVOAMENTO DO DATA WAREHOUSE

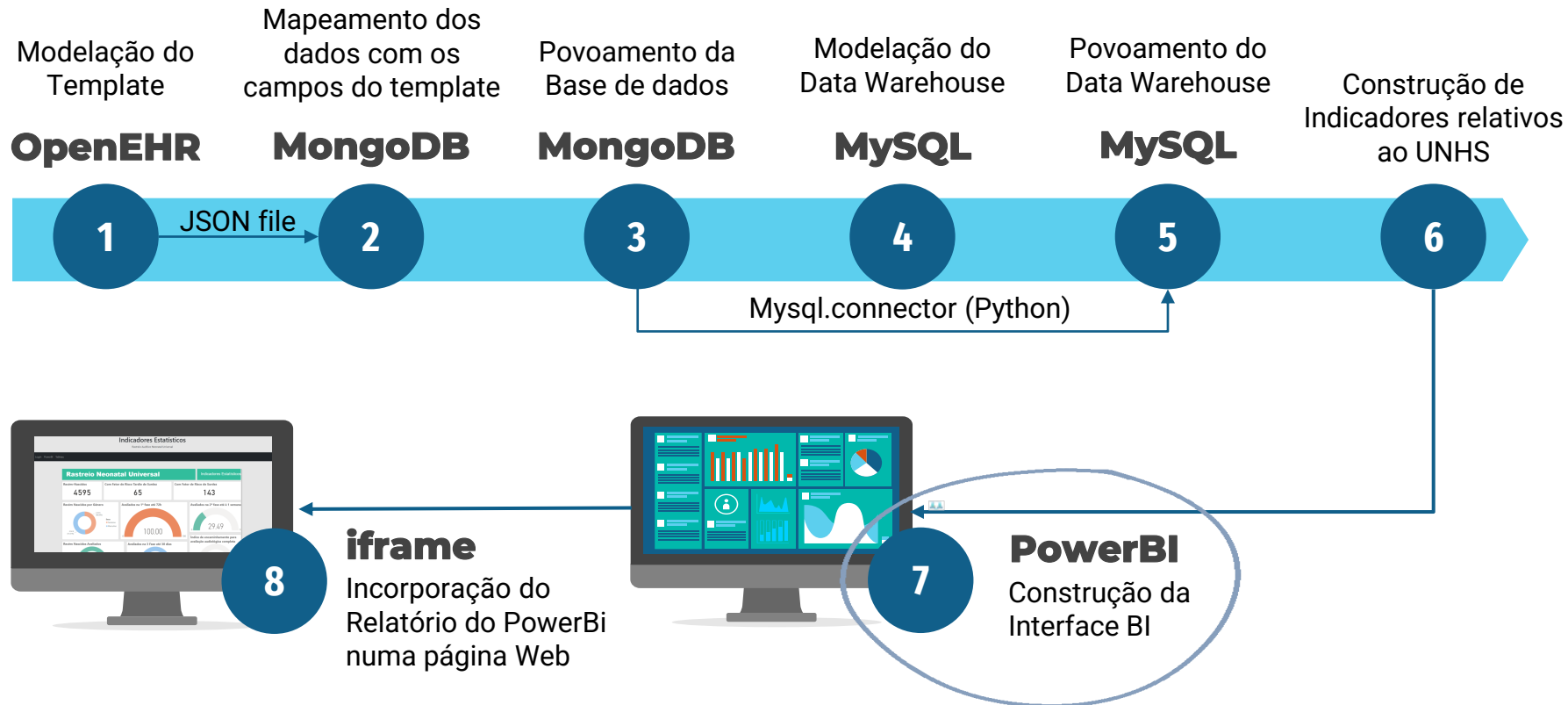
Result Grid																	
Filter Rows:																	
Edit:																	
Export/Import:																	
Wrap Cell Content:																	
	id	num_seq	num_processo	data_nascimento	gestacao	peso	data_avaliacao1	nmecc_avaliador1	data_avaliacao2	nmecc_avaliador2	data_avaliacao3	nmecc_avaliador3	data_avaliacao_r	nmecc_avaliador_r	idade1	idade2	idade3
▶	1	147198777	16000289177	2020-02-05 23:29:00	41	3155	2020-02-07 00:00:00	21934800	2020-05-05 00:00:00	21899700	NULL	NULL	2020-02-07 00:00:00	21934800	1	89	NULL
	2	149157177	16002070577	2020-10-21 13:30:00	38	3150	2020-12-02 00:00:00	21934800	2020-12-09 00:00:00	21899700	NULL	NULL	2020-10-22 00:00:00	21226500	41	48	NULL
	3	149220177	16002141777	2020-10-28 16:29:00	41	4180	2020-10-30 00:00:00	21899700	2020-11-20 00:00:00	21934800	NULL	NULL	2020-10-29 00:00:00	18104100	1	22	NULL
	4	147504977	16000581777	2020-03-17 02:28:00	35	2480	2020-03-20 00:00:00	21899700	2020-05-29 00:00:00	21934800	NULL	NULL	2020-03-18 00:00:00	18104100	2	72	NULL
	5	149279177	16002195977	2020-11-03 15:15:00	39	3260	2020-11-05 00:00:00	21934800	2020-11-26 00:00:00	21934800	NULL	NULL	2020-11-04 00:00:00	21352500	1	22	NULL
	6	149310577	16002244177	2020-11-07 02:43:00	38	3135	2020-11-09 00:00:00	21899700	2020-12-22 00:00:00	21899700	NULL	NULL	2020-11-07 00:00:00	21352500	1	44	NULL
	7	149314977	16002247177	2020-11-07 18:55:00	40	3290	2020-11-09 00:00:00	21899700	2020-12-22 00:00:00	21899700	NULL	NULL	2020-11-09 00:00:00	18104100	1	44	NULL
	8	149329177	16002259377	2020-11-10 08:31:00	39	3020	2020-11-12 00:00:00	21899700	2020-11-20 00:00:00	21899700	NULL	NULL	2020-11-12 00:00:00	21899700	1	9	NULL
	9	147022177	16000108777	2020-01-14 14:45:00	41	3410	2020-01-16 00:00:00	21899700	2020-02-13 00:00:00	21934800	NULL	NULL	2020-01-16 00:00:00	21899700	1	29	NULL
	10	149398577	16002330177	2020-11-20 07:37:00	38	3330	2020-11-23 00:00:00	21934800	2020-12-04 00:00:00	21934800	NULL	NULL	2020-11-20 00:00:00	21352500	2	13	NULL
	11	147748777	16000848777	2020-04-26 13:27:00	39	3290	2020-04-28 00:00:00	21899700	2020-06-17 00:00:00	21899700	NULL	NULL	2020-04-27 00:00:00	21821700	1	51	NULL
	12	147848777	16000974377	2020-05-14 12:21:00	37	2535	2020-05-15 00:00:00	21899700	2020-06-29 00:00:00	21899700	NULL	NULL	2020-05-15 00:00:00	21899700	0	45	NULL
	13	148123577	16001269777	2020-06-27 02:12:00	41	3470	2020-09-11 00:00:00	21899700	2020-12-16 00:00:00	21899700	NULL	NULL	2020-06-27 00:00:00	21899700	75	171	NULL
	14	148167977	16001316377	2020-07-03 15:40:00	40	3780	2020-09-22 00:00:00	21899700	2020-10-08 00:00:00	21934800	NULL	NULL	2020-07-03 00:00:00	21899700	80	96	NULL
	15	148291177	16001406177	2020-07-20 16:13:00	41	3810	2020-07-22 00:00:00	21899700	2020-09-09 00:00:00	21934800	NULL	NULL	2020-07-20 00:00:00	21899700	1	50	NULL
	16	148334777	16001436177	2020-07-25 19:49:00	40	3350	2020-09-10 00:00:00	21899700	2020-09-29 00:00:00	21934800	NULL	NULL	2020-07-25 00:00:00	21899700	46	65	NULL
	17	148529577	16001569777	2020-08-15 07:15:00	39	2590	2020-09-22 00:00:00	21934800	2021-01-18 00:00:00	21934800	NULL	NULL	2020-08-15 00:00:00	18606000	37	41	NULL
	18	148610577	16001620177	2020-08-22 10:25:00	36	2960	2020-08-25 00:00:00	21899700	2020-09-18 00:00:00	21899700	NULL	NULL	2020-08-22 00:00:00	18606000	2	2	NULL
	19	148772977	16001747577	2020-09-10 08:50:00	40	3240	2020-10-22 00:00:00	21934800	2020-10-29 00:00:00	21934800	NULL	NULL	2020-09-10 00:00:00	21821700	41	57	NULL
	20	148799377	16001769177	2020-09-12 14:31:00	41	4025	2020-11-09 00:00:00	21899700	2020-11-20 00:00:00	21934800	NULL	NULL	2020-09-12 00:00:00	21934800	2	57	NULL
	21	148861377	16001814377	2020-09-20 18:17:00	41	3475	2020-11-16 00:00:00	21899700	2020-11-27 00:00:00	21934800	NULL	NULL	2020-09-20 00:00:00	21934800	2	57	NULL
	22	148898577	16001854177	2020-09-24 16:35:00	40	3850	2020-09-25 00:00:00	21934800	2020-09-28 00:00:00	21899700	NULL	NULL	2020-09-24 00:00:00	21934800	2	57	NULL
	23	146959777	16000038177	2020-01-07 04:56:00	39	3055	2020-02-12 00:00:00	21899700	2020-02-21 00:00:00	21899700	NULL	NULL	2020-01-07 00:00:00	18606000	35	41	NULL



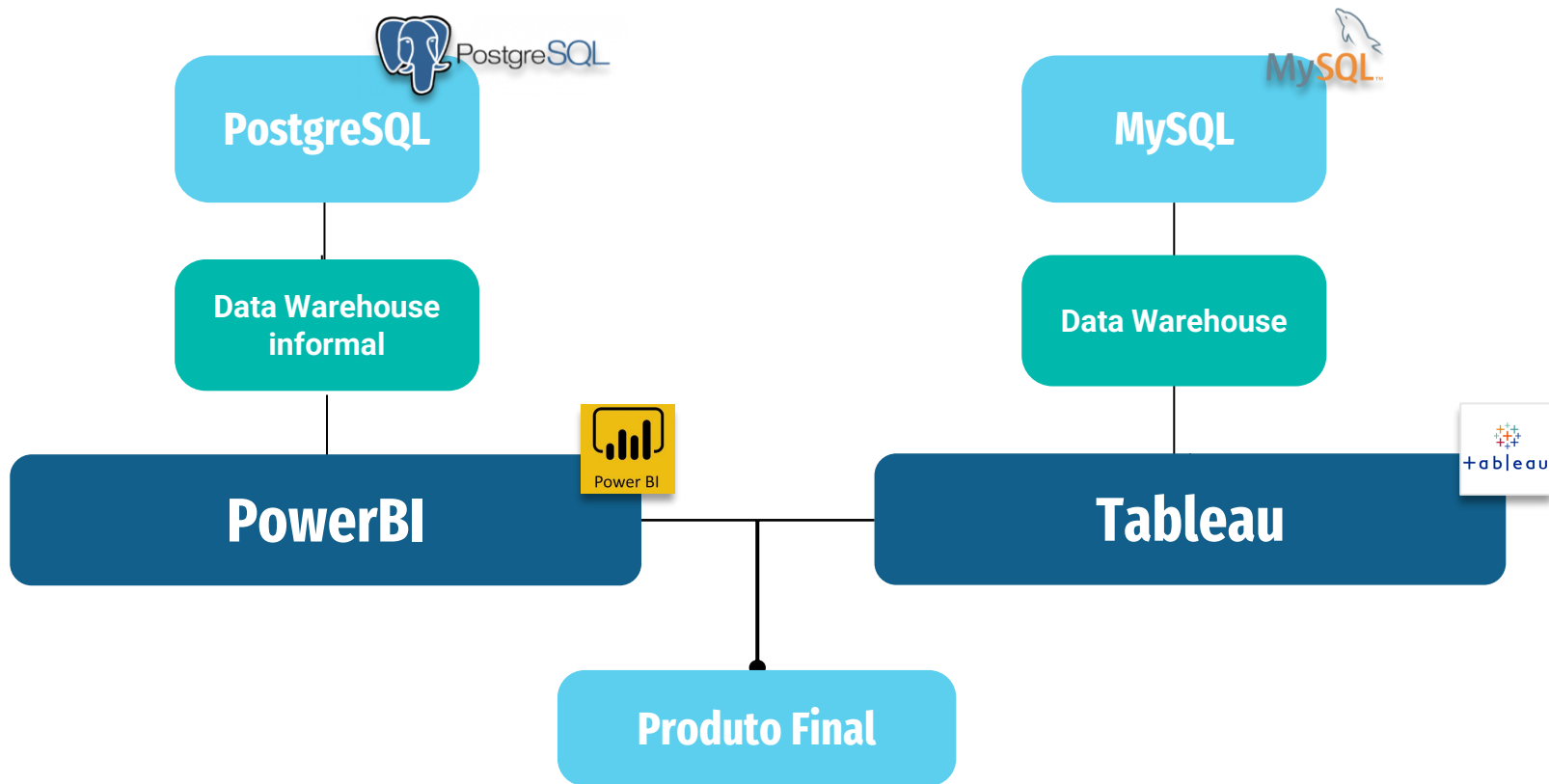
PIPELINE DO PROJETO



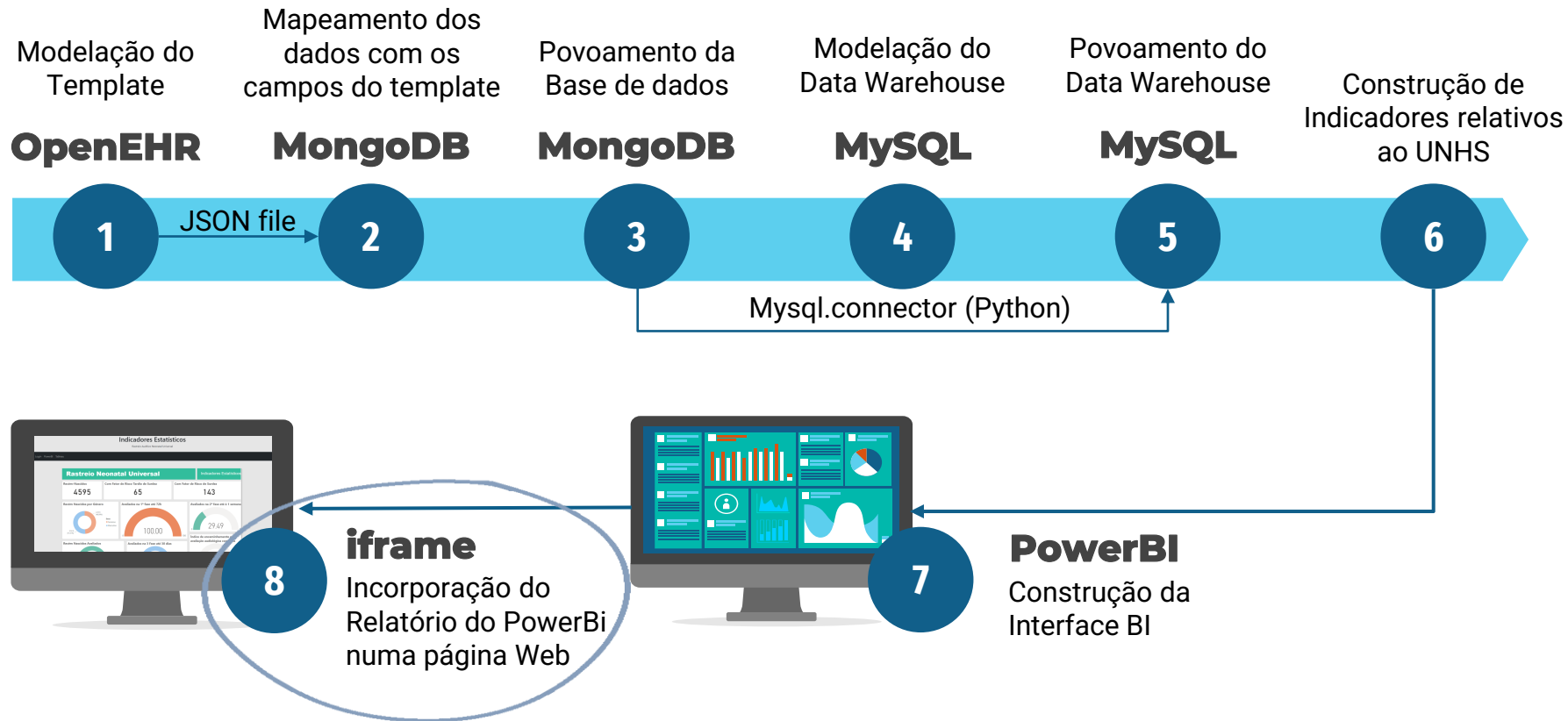
PIPELINE DO PROJETO



CONSTRUÇÃO DA INTERFACE BI



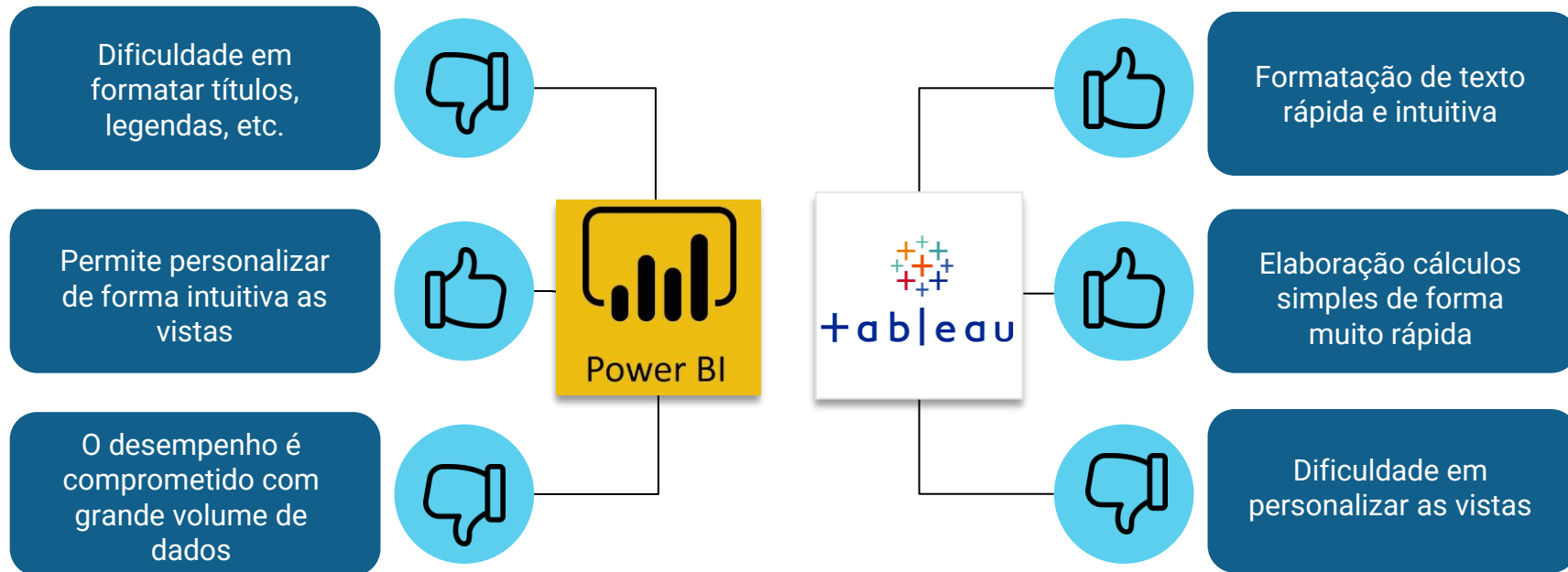
PIPELINE DO PROJETO



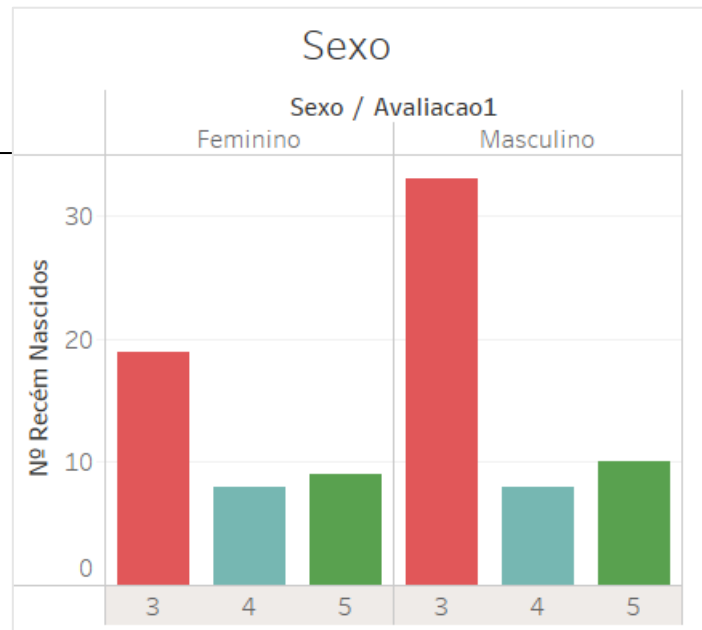
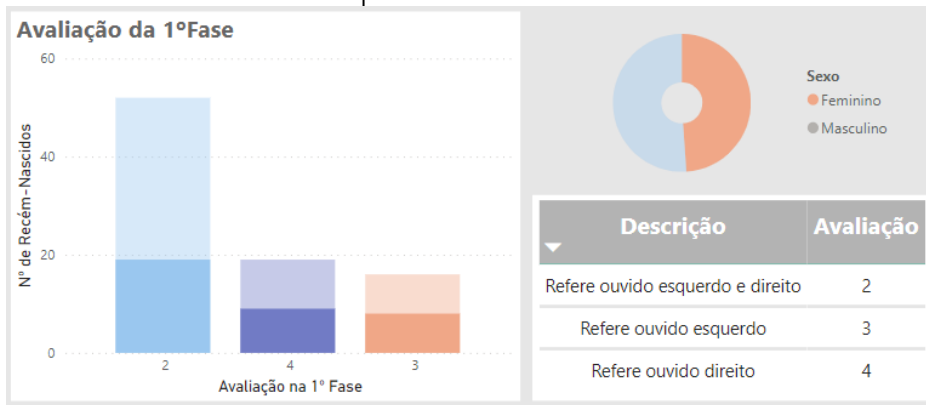
POWERBI VS. TABLEAU

Fator	PowerBI	Tableau
Integração	Maior facilidade em integrar-se com outras APIs por ser da Microsoft	Não se integra com tantas APIs, o que torna a sua utilização menos transversal.
Custo/Benefício	Inferior	Superior
Facilidade de utilização	Intuitivo, user-friendly; Interface com o qual a maior parte dos utilizadores está familiarizada. Dispõe de menos ferramentas.	Menos intuitivo; Incorpora recursos de linguagem natural, o que permite encontrar soluções para problemas complexos, entendendo melhor os dados.

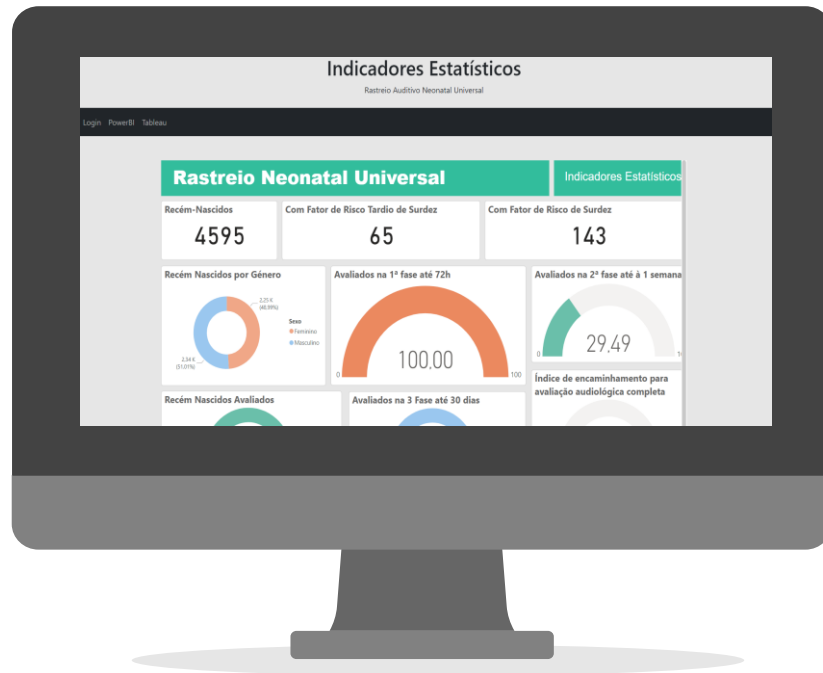
POWERBI VS. TABLEAU



POWERBI VS. TABLEAU



CONCLUSÕES E MELHORIAS





OBRIGADA PELA VOSSA ATENÇÃO!

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- Tiago Novais (A88397)