

天下营销，唯快不破

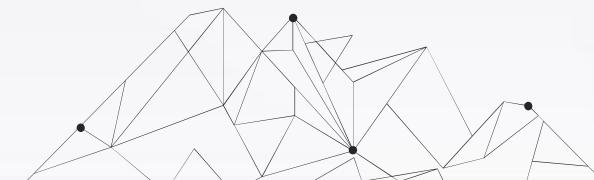
TalkingData营销云技术实践

主讲人：姜伟



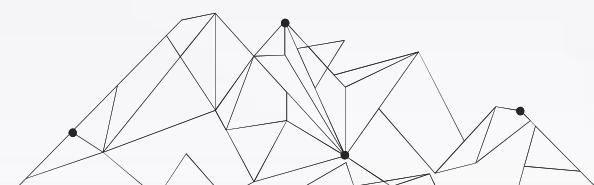
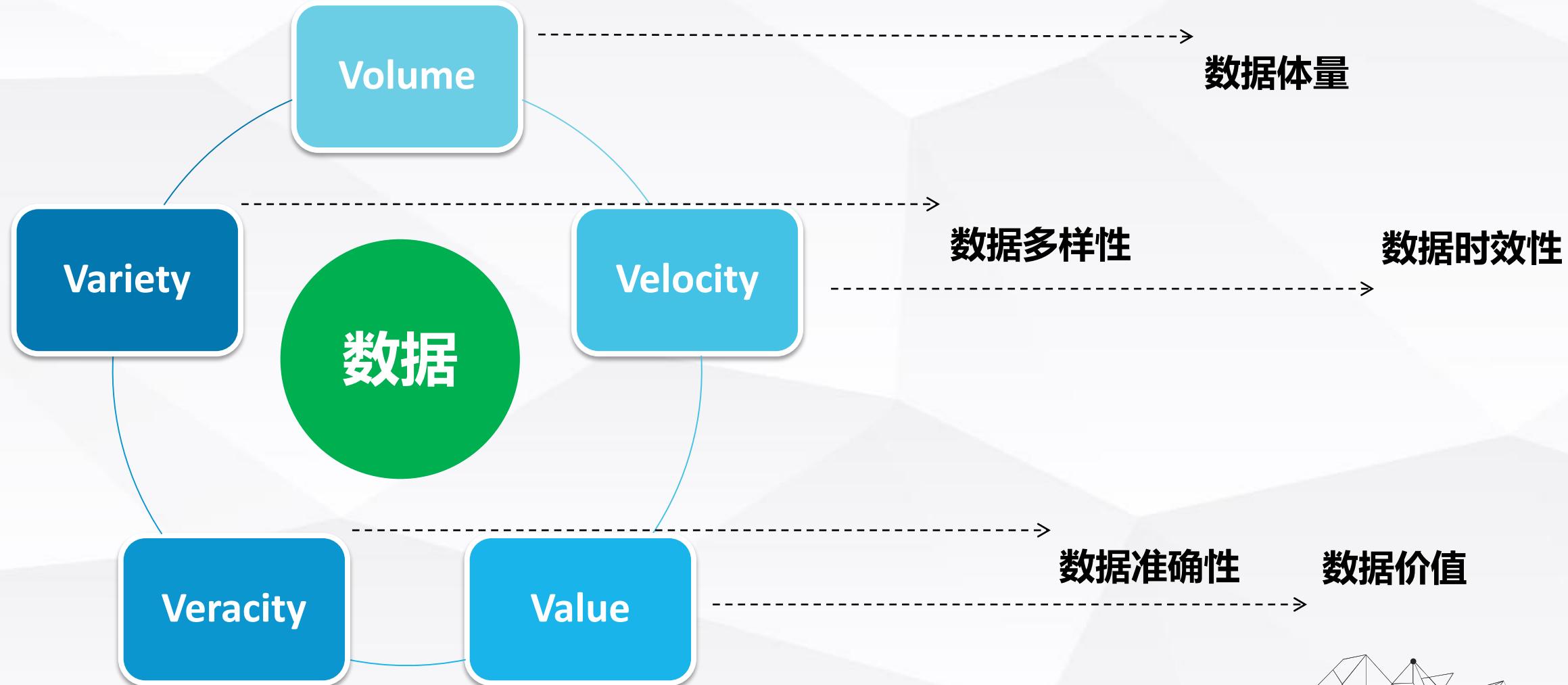
Outlines

- 智能数据时代，不“快”不“行”（3 mins）
- 智能数据的实践：营销云（5 mins）
 - ✓ 营销云介绍；
 - ✓ 营销云开发的挑战；
- 营销云的尝试（27 mins）
 - ✓ 数据组织和规划（5 mins）
 - ✓ Bitmap计算引擎；（10 mins）
 - ✓ Lookalike算法；（5 mins）
 - ✓ 基于地理围栏的快速人群预估能力；（5 mins）
 - ✓ 技术指标；（2 mins）
- 远景技术规划；（2 mins）





智能数据时代的来临





不“快”不“行”



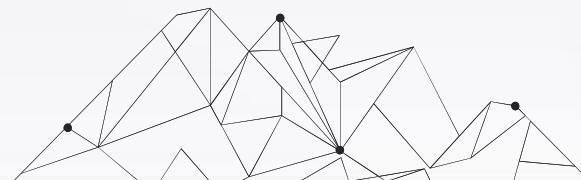
为什么要“快”？



什么叫“快”？

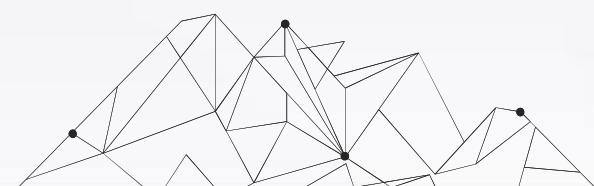


“快”的代价是什么？



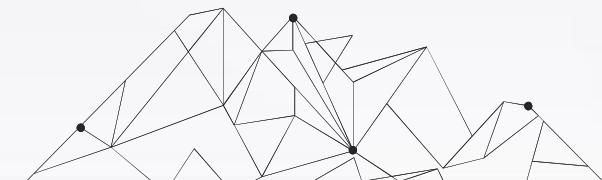
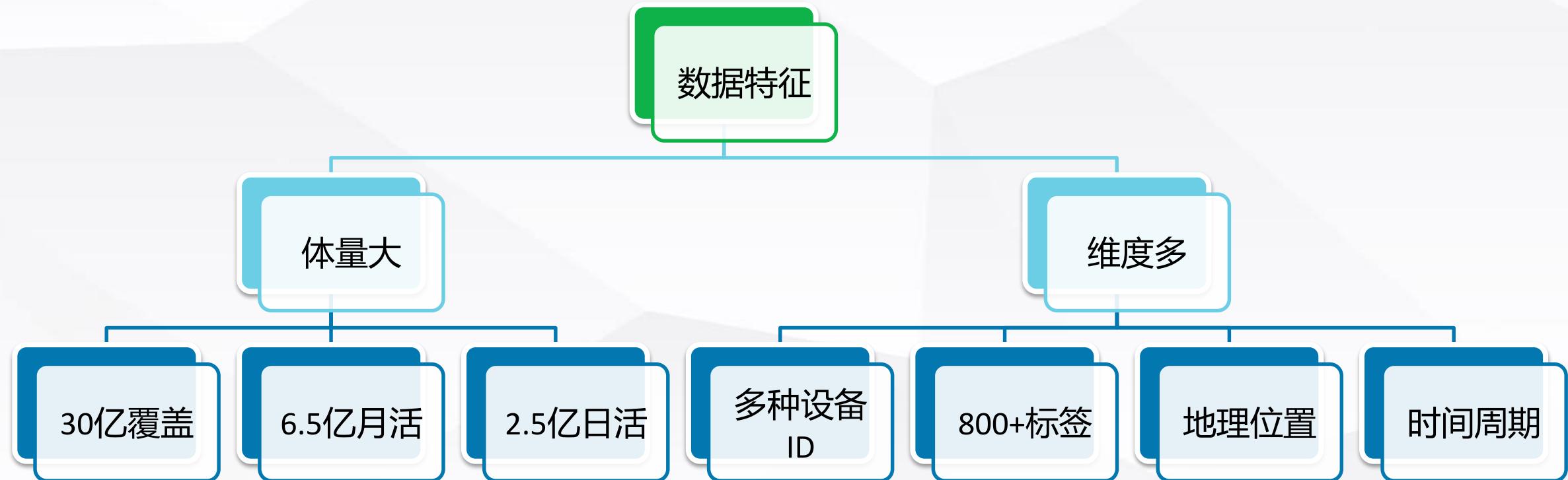


智能数据在广告行业的实践-营销云



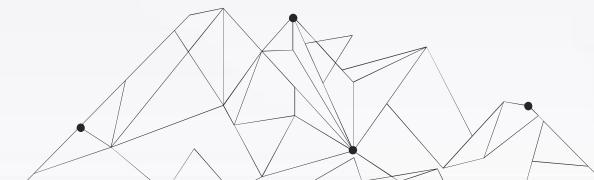
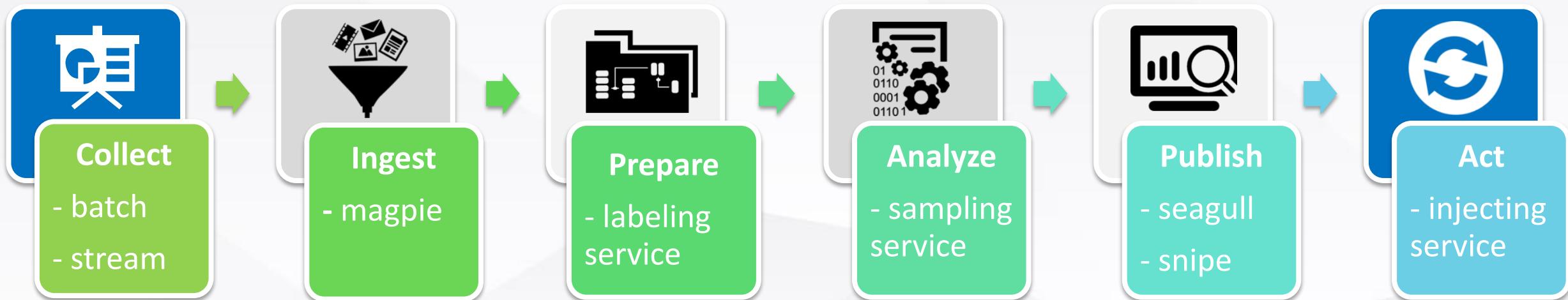


营销云-挑战



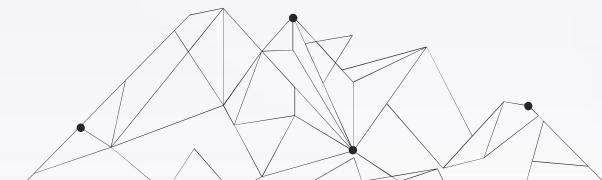
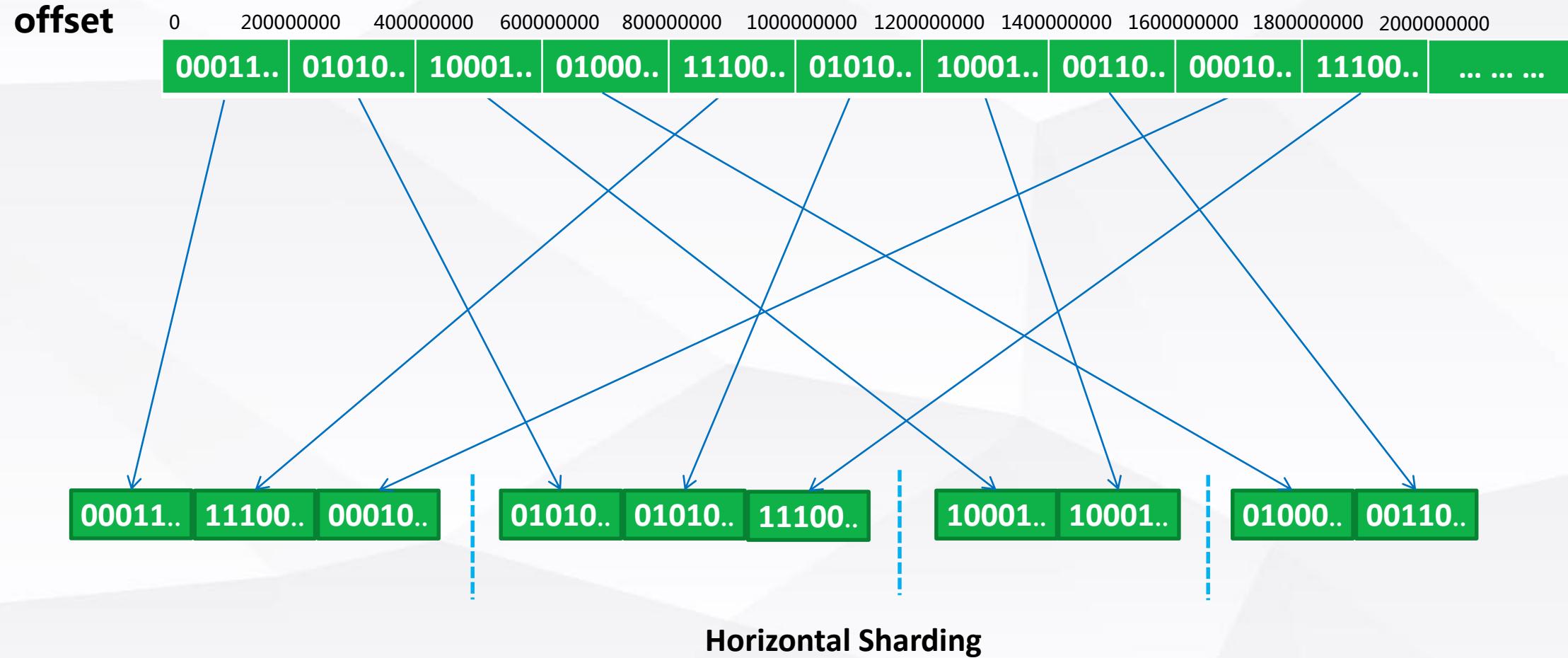


数据的组织和规划



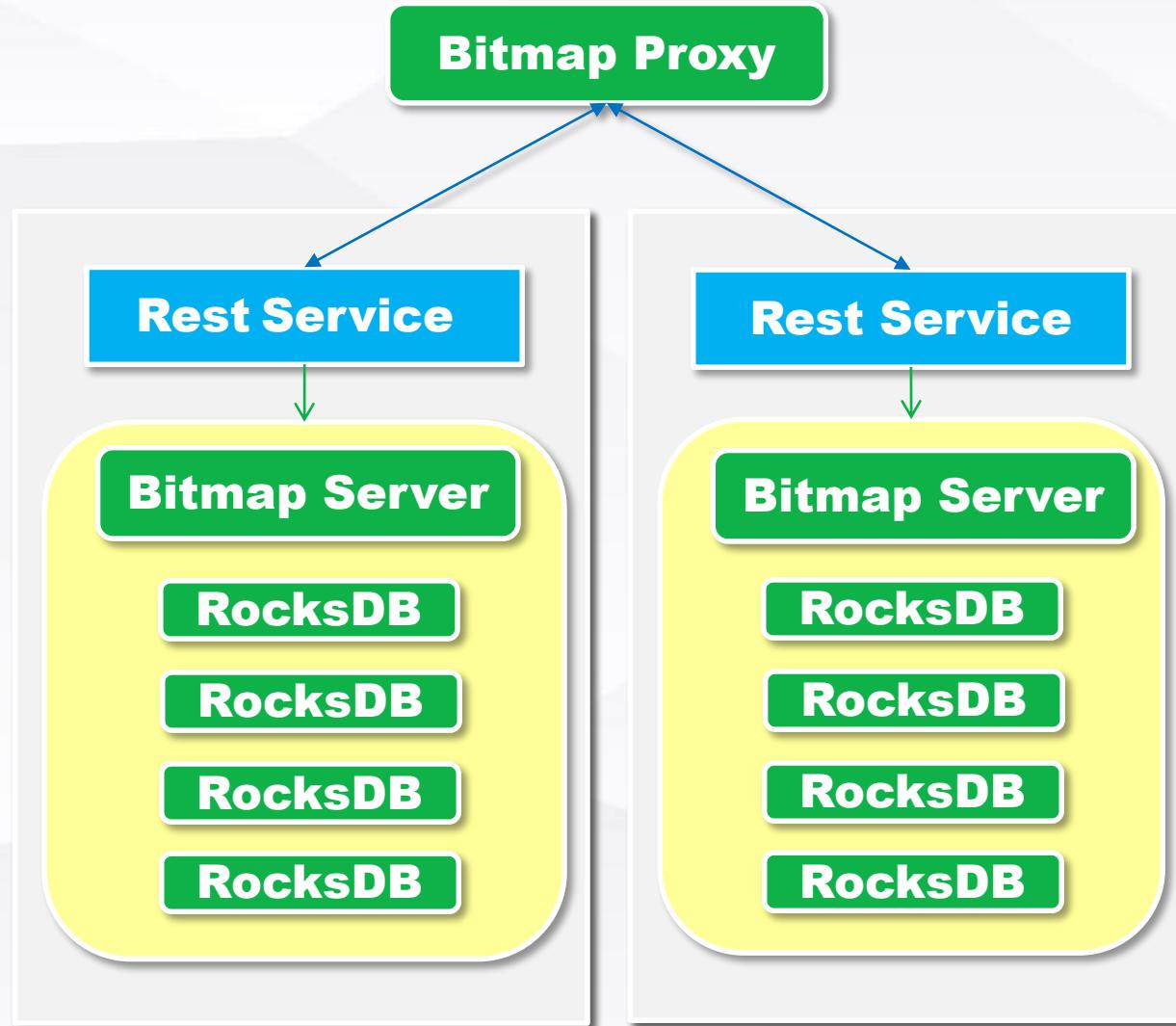


Bitmap计算引擎 – bitmap数据分片





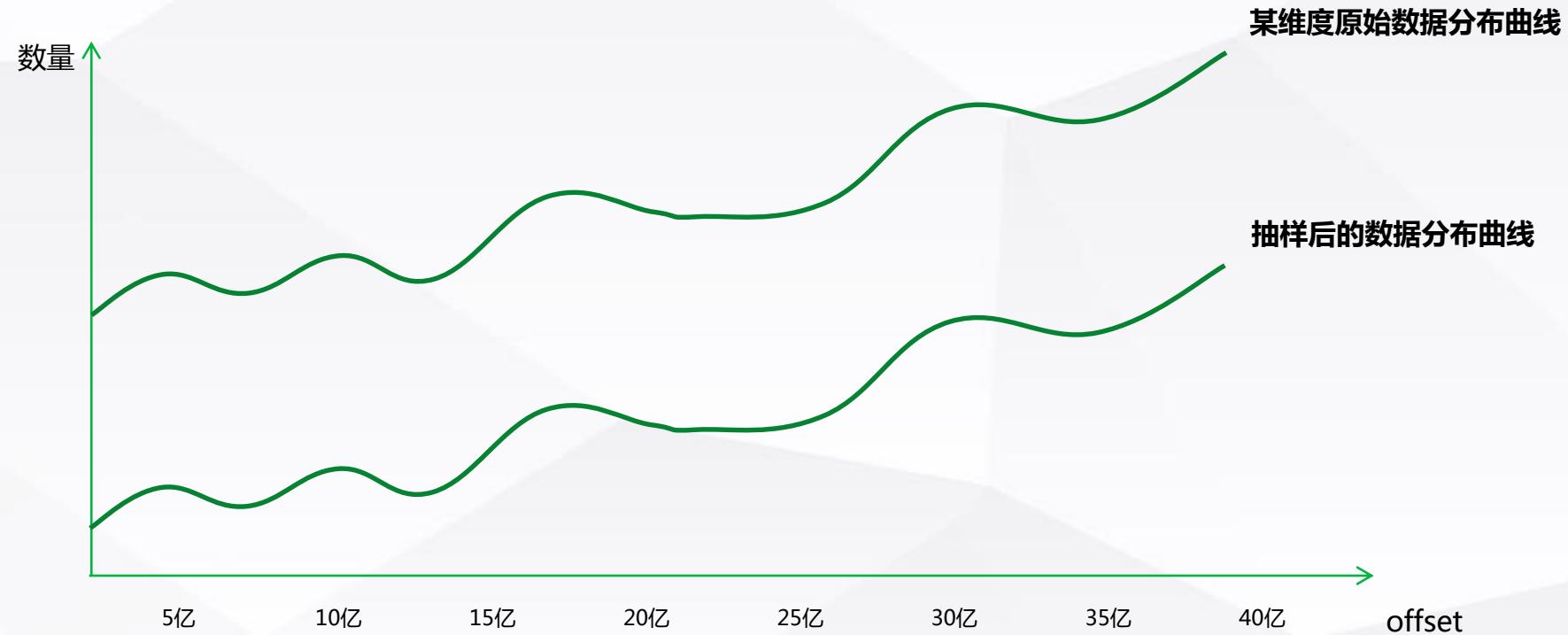
Bitmap计算引擎 – 架构



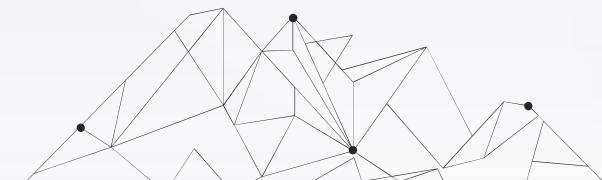
- **Bitmap Proxy (app layer proxy)**
Round-Robin机制发送请求；
- **Rest Service (computing layer proxy)**
提供基于表达式的bitmap的and , or , xor , count等REST服务接口；
- **Bitmap Server (computing engine)**
提供分布式bitmap计算能力，计算完成时同时将操作结果进行存储；
- **RocksDB (persistence layer)**
Key-Value存储系统



Bitmap计算引擎 – bitmap抽样能力

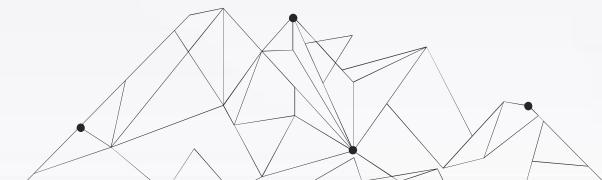
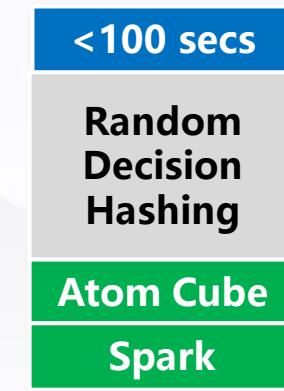
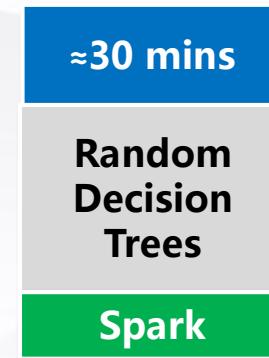
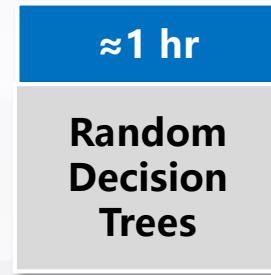
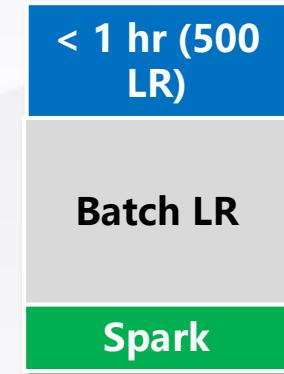
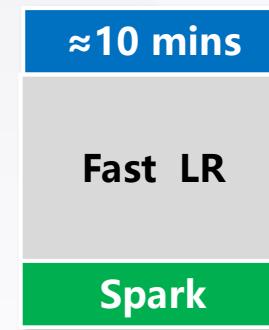
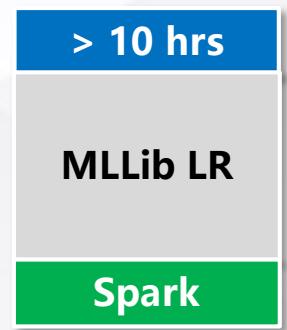


数据体量庞大，单一维度精度要求相对不高服务场景（例如数据交叉比对）



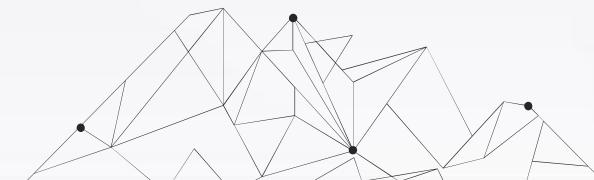
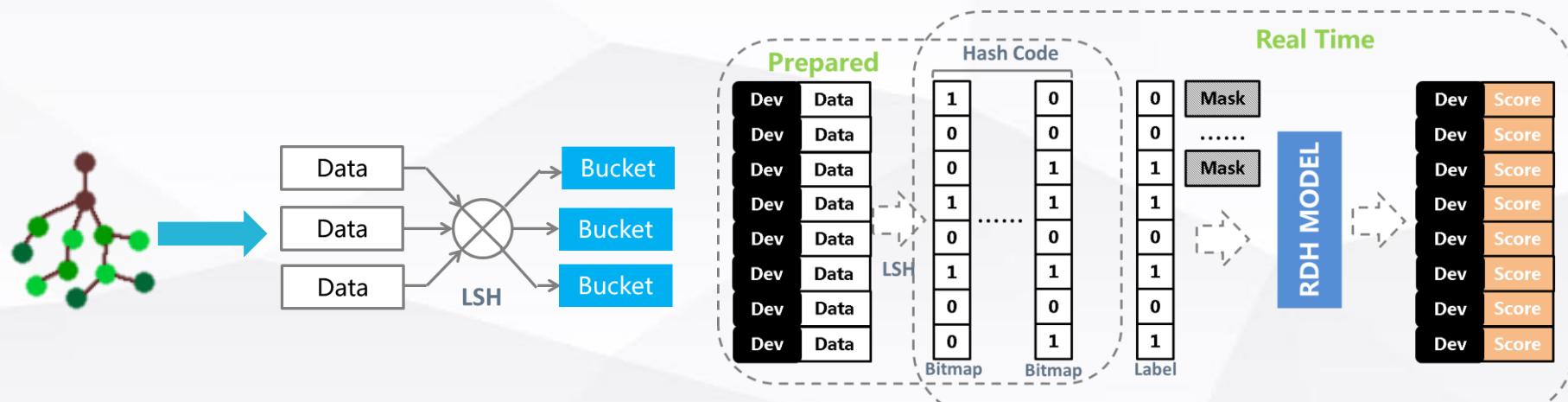
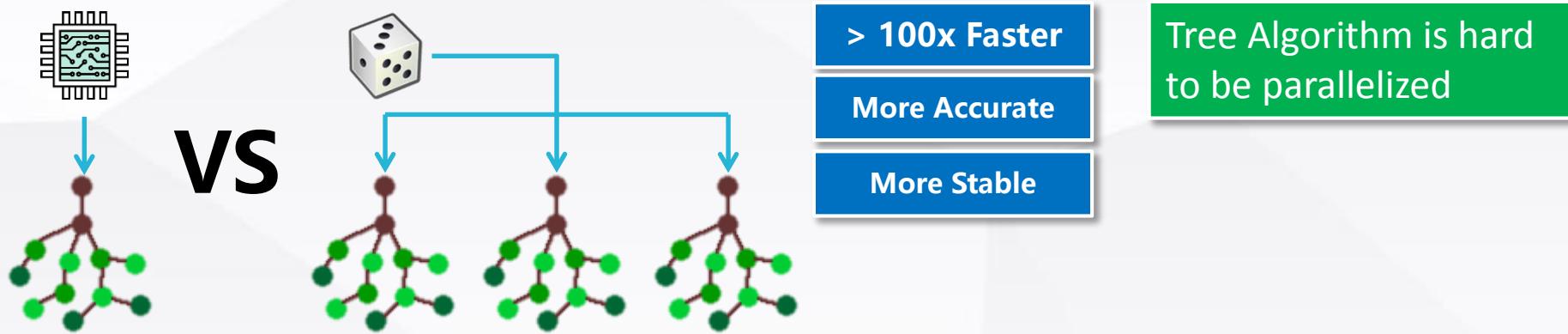


Lookalike算法 - 指标



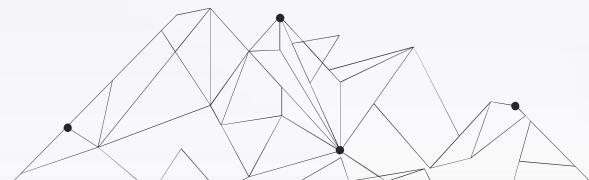
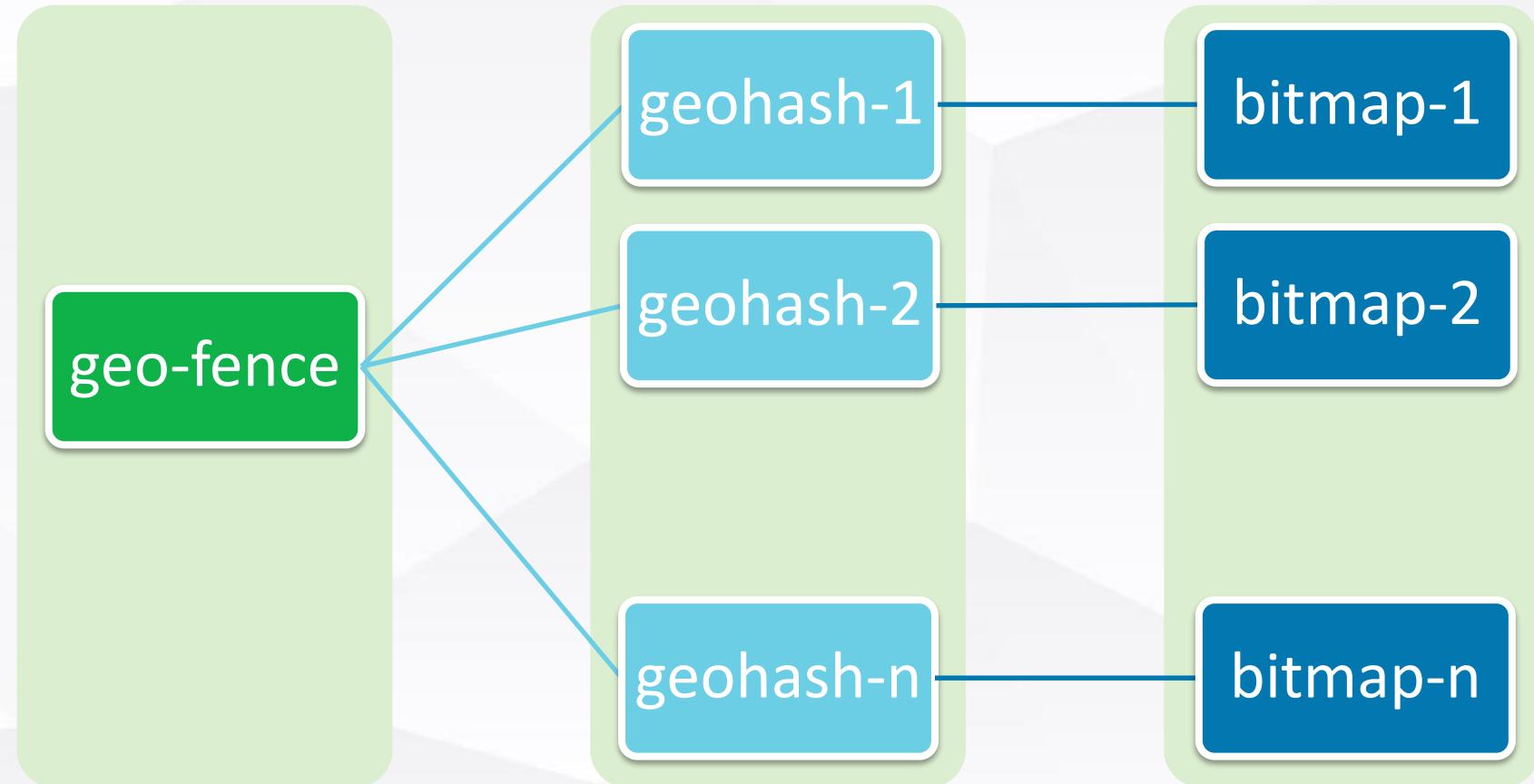


Lookalike算法 – RDT&RDH





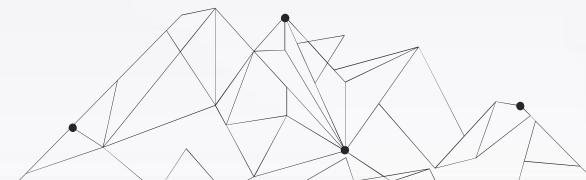
快速人群预估能力





营销云技术指标

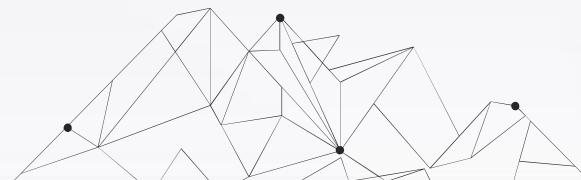
功能模块	功能描述	数据量	处理时间
人群构建服务	标签构建	1亿设备	< 5 secs
	上传构建	1亿设备	< 5 mins
	Lookalike构建	1万->100万~2000万	< 15 mins
	人群预估	方圆5公里(1百万设备量)	< 1 sec
人群画像服务		15个维度 (1亿设备量)	< 10 mins
数据投放服务		5种ID类型 (1亿设备量)	< 10 mins
前置机服务	RTB查询	5亿设备	< 5 ms (6000QPS)





远景技术规划

- **Bitmap computing engine open source;**
- **ML for segment optimization;**
- **Investigate more approach to improve “fast”;**





THANKS

聘

Let's rock data together!

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TalkingData