

○ 풍납 백제 문화 공원을 대상으로 ○

# 지리정보기술 적용 발표



# 프로젝트 배경과 목표

- ☑ 풍납 백제 문화공원은 개장 당시, 해당 지역 생활환경 개선과 탐방객의 방문을 통한 지역상권 활성화를 기대
- ☑ 답사를 통해 확인한 결과 평범한 동네의 소공원으로만 방치됨.
- ☑ 또한, 상권 활성화와 같은 부가적인 효과는 전혀 확인 할 수 없었음.
- ☑ 디지털 트윈 기술을 활용하여 관리가 미흡하고 매력없는 유적지를 당시의 도시계획의 흔적을 증거로 백제 시대 마을 복원을 목표.

# 연구 지역



## 풍납 백제 문화 공원

- 송파구 풍납동 위치
- 백제의 도시계획을 추정해 볼 수 있는 역사 공원
- 발굴 당시, 관청 시설, 도로, 창고 등 다양한 유물과 유구가 확인됨
- 현재는 동네의 소공원으로 입지

# 공원 내 백제 살림집



백제의 대표적인 집 형태는 큰방과 출입구가 연결된 'ㄱ'자형 태의 집입니다. 큰방이 육각형의 모습이어서 '육각형주거지'라고도 부릅니다. 재현된 집 내부에는 실생활 토기, 철기 등 복제유물을 전시하고 부뚜막을 설치하여 당시 백제인의 생활 모습을 체험해 볼 수 있습니다.

# Pix4d capture 계획비행

기종

Mavic 2 Pro

01



높이

45m

02



Front overlap

80%

03



Side overlap

70%

04



드론 비행 속도

3.2m/s

# Lidar 스캔

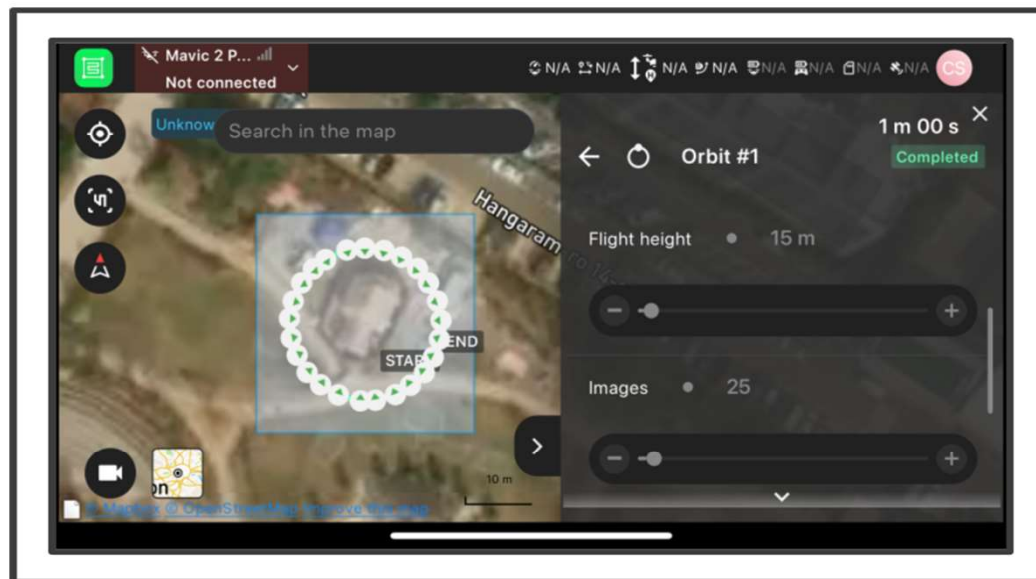
01 아이폰 14 Pro 기종의 Lidar 센서 활용 - 토기 & 백제집

02 토기 모델링 Good!

03 백제 살림집은 상부를 촬영할 수 없어, Bad modeling

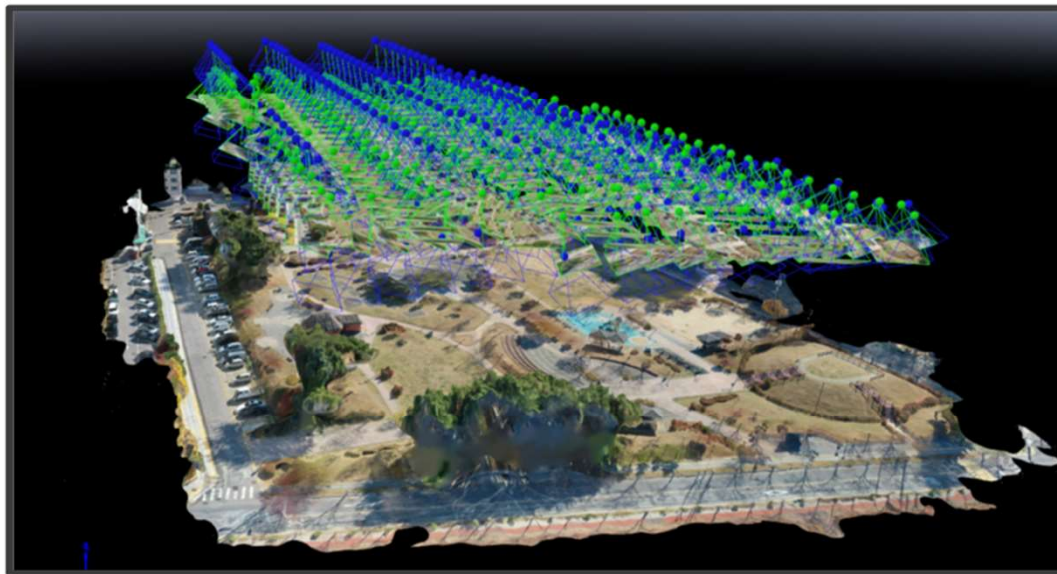


# POI 비행



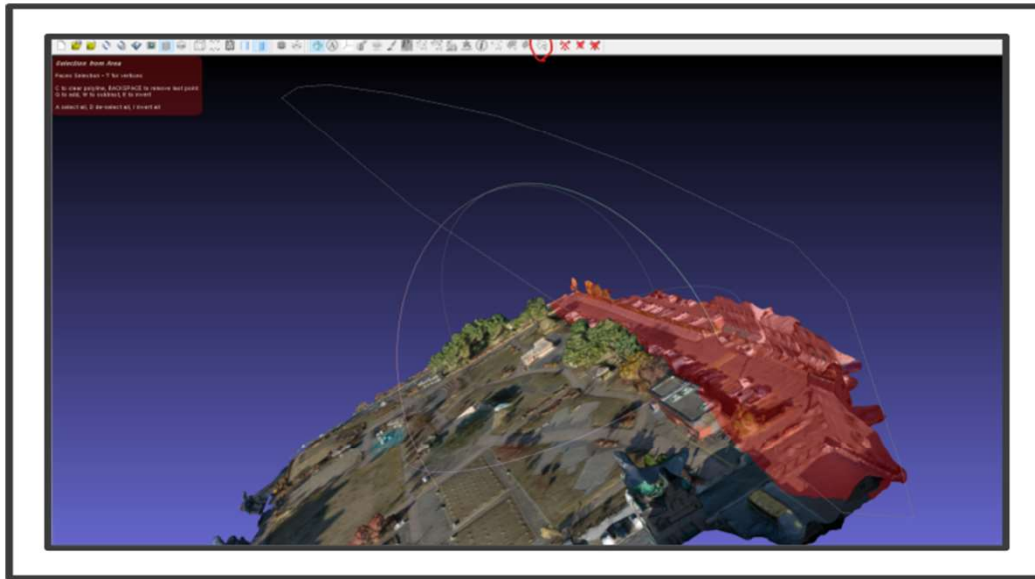
백제 살림집의 정교한 모델링을 위하여 O형 궤도 비행

# Pix4d Mapper Processing





# Mesh Lab 소프트웨어



Pix4d mapper로 구축한 obj를 오픈소스 3D 모델 편집 소프트웨어를 활용하여 Cropping 진행

# Cesium Ion

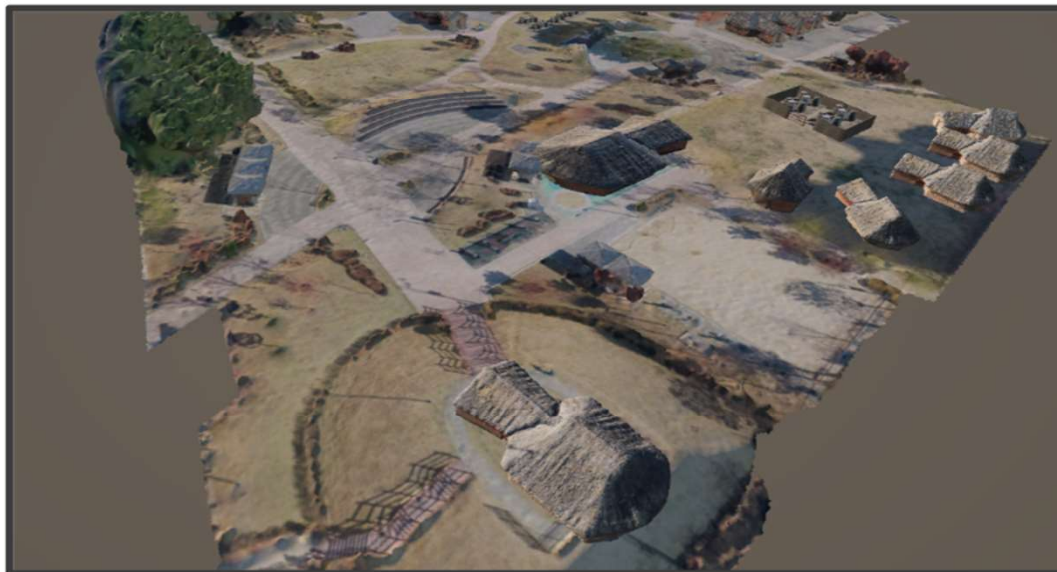


https://sandcastle.cesium.com/#c=7TtrUxtXln/LrU7kWBkIoQkQGcy4wCT4GDjAM4mHJUESA20abqV7paxnflWxsKFaccrRzWBcPPYNGSZcE4ci1+M9Mar+oW/9hz7n39kMCHHClUpnaUH6g233ej3vOvUfB4GBCSSUtuilGX+I45IyrASDpEvUpczU+UHR8bKVLUiQqxc0ZpbxM+5p1a2Yi1s1mBlPm9tZjsPsubT9drdYu12ycpuWsxcsMIQCL2qlqTseURGNs4lk6KuD6mTolJhpvEG+cnrj9M5v3S+d7LN3vDF6VevVcZiCW7elt6j9OfFdp1Pi7AS1+IPpyEI3qvX2june7v/kC+IIVCV6YG5L6hT6avXL1S9A9dvHpFCjVfmb04+fiQT+RK98BE/4cXpL6u8+krgOzC1cvnF65+HsXpN3/2idR/tSdy4WZP7OLN8R8Xh4DlpY9fC9fvtsjgQNvQxStXPzt/fkSc+qo7mpz48KvR859PF3Zj8L/5x9dHJcmh5s6hr0KliuYPJetR2bqzbmVfmqUH1tZMLZ8z75es9XitWzKfFsyHhWElqSq6Qa5J4rSokU6iilNMcxvUrvmGm5L0c5eqGAUJEbXhpgD5elghLiXQJLDNGTVl9yoNIHyGqGkAEUiTr0kpUfMTTrtvX291Own7A1PBCO0IMJyTD5oP9N1T/jjCmqqVNA95yui0Zvyhf2BwDRlb+EA8YDcGVubzLq9XXC8jM3BL6KkltlYApdTWVocVJrmgJOVFFmZldVQEp0gbE00ibpwBb4q6wU3lEKPLiB0Ufe3OjLw+AE5HzL0Z8DRiZvVWowrxmZV8DdiVrXVMVzNMKcSa3bGebJNqacZceAbyyqJlBDEkWGXPkrqHdOE6hvd2kuaOV/rQSWKjlyubi61ouDuFurnb24a0UXYepb1l9xb72qg3jh31RuAHWOBUS56nKkGqTFYVY69WQYwGraU1aUoypGuilIRSKR/ng6JE57wum9r5vqB+ezAUZtVOAC+a255c2nGxymCwjsr1uKOVchar/PoFowQTuumqk4NqXXYGcMu0vU8d0AwMltcLOPEw7q5nEcSkA8WN81tkK4M3FjF22AXOWTE64aW0CEEOAUhgSoS2DJsK8aljXlmoXaAeGQR8e3/OR3y0NuObrr7n3wsCpLoty6ia7B8YU4ZAJktXqEuMJwngTWzmuDxg1Z9COWBSU4SPy25x3SXNBVK1lGq8rWjY6l67KF188o2WPZQV3ewr8kmTCSE8QH4aVqDiNWftN8lsdgKRUGeaG3g8He5K27q8Jlq4JZfMZspsqikvjH6j5fHvbMjtdtl8/j2xfgukVxITP1CvApsWynAirIxcL07tyG8FqtLZbgD2EZ03YLLnEPiG7cqE+ObmM33NfNEJTEltsPmUfvLFXN2m5ill1axQKp7+9a3y5Ay8aWUQcc1KW2AstrJlwwMf85ORN5nYayKAZ0NwrLnJWlqnOhasnO4aclw0np7MAgrwi4upHUJYUhhJQRENWEuMi8FQKBxsDoUjwXAOgGoNrvt4AD+FQ6HWUCzcGokf2EgoPCKNxOljzpN4NBRqFq6mx//dujEWO6fbWKLDTcTlgP4kZAM48MRc2fw7ZvzDbzlfW6allLGRDtpDoXS1ztiStLtcUjGOxmV1eRk85lKaLcXnlVDUOdgvOAXxps8sqdf/HmSXlhdATCuFaeRBGYEsHK/04c9+H6bUIBiWwWuFavuK31mDs7YOJradg0fWl+A8MTWq5QrWUswpf6/H36AZYLTwpE2u/YJXnlU4J1Avw+n2QX9qYmxcXQgYGmCO2rdEm2mXNMZMGqxur9JfjpcqOwL9NGnBRcWcguxvp2ztrl+NOXFdv242Mr/d3X3XBAB+IbBqPNE6CV6GNP6GxEIhQFwtZflmgfni8TzQCXBgUyZ7SiQQYCYJMsoG75tbs7XbmOfmMWWBl6xtXeMrbDmx1q9bGDsoQJf5QL0Qga2Gfi3Y2mk7X9CEfz6sH3bFAANEKltaQo4JQuuP32za58M8EoxXyKcAGQZWAODHb56iss3FhbZ3kerLEIR+MAap/IAvw3t8FBabxG6s1HLbttpruTVrvgBWQJlk+puqbP3wHmxXUAoBSqkiVdEV+CFAZWluuFIDCia380RTL53gl0sGGYNDZgr424cjkFpdPcvKAoaZemhlcYjS9XdO2xXlRdJQdb2cIKbBohdy4P2dpB/Bk9a/zMQzg8lDkqOWz4AN4NauK04swh6hO7J25QPwQUKJH455e2qTDFLPcYc+4AdWGWwrrc5hqe20wAQlF4BEo63oE8BGnyM3lut3KvubqPW0VMhw+5UKYBIGX0Et8mV05T3Yo1bbWlWZ+5q0sc9TheLyNRgalu/garGE+f4Nu971MpiLouFONbRYBEnqVA2Mo6i4/79ZRf4gQMhM1GILherujrn8gjrQagnqiEM+ascGkieBsBe2XpaRI+J1T/6DIAhTD9vFScbb3WUtluAbAIYUtvHw5ouqCICdXqg9s8LEyarDFsH8+hhZHO2Vjh8jGXsc0GsuwDZyV4mcUmPlqtTcg0ATvGU8bmwwWEfvkSnsx6tUfQNFLayoutf3qLrAibfB1ubIC2u+UNuYdyMeg8PVA/rsd9sYlcwIsu5jQEdozhYnm+DOxXhbQnLGvpIUkWRn6yJvMkWP6xisueYvYQG26PMJD9gtce94tjvHJNjoaKmtZVAETkwhkTPVbB+ZDml9r31Ss3DzqoVVoW4vr1m6+zuWRDQwsUdiqwg1S2z47Far8bTKYs1qCJQIMkH0JKgdnmd1hLDiL5kreLM5D/PIVZgpbqbdadGGeO8gwV3ZOK+bszVztrNo+mwMu3sg2asnlbtpMcEfzsv6M5HBIIFCuYUCS2z+WZanmlLohiWkmmlIXCad6TyrCqW0TrakNR+ZmtvoTyhPdOdjPca++u1VcjmWMXQqQncbRf7J8hKFTCP+dcddp1pCAFyXTUDTLjc2k4NJTRSVwXQlKfZcExXj/aSR66R5CaUa1Bjd9hslQO8enMoo/mf77DnnJKArYyScAbj6VWvZ5eUpeSkn3S+b0viMpeGJ2Kqf/SqmDSAw/o+BP4xWCGt6hLicnmp48cdBtWWb8XLtkhiwyHqap4Knf5g9BQqnvZoiW+d8FtqEhnp9OP+L3CcG68Ba1T8GIO25vzCrcexBZXlIGMmHKKZroit8OFucV+vRU4zoxDUCgKfT1/Ghrp6uv+pip66jCnhsAS3a66htuYoU+YwV+O54qOI8XfoanrW4sM9Ym0vDyk91hQ0tIWsq32a7ZK9attjCYmUjcuUcsc6WJHA2AZU1lxC0mVkydewcwtsVSOYQU1wfMdu0sYVTNKSILG89MToi6PWT9esehdnX3DTAGWx14ko0KXNGG0VMPK7D1jqPFs4Ftvz03q4DNuZelKEZ8FTcidAGHXTEKGTf4m3hnNd8oQCBPw0calmUINF/T0JCx8+grRrr1+nGeAN9Gy+L2BmBj+2VePZCAwUrV7p9Y14tsvzHksYnPoywLaXZmkVjIAYHy/X5u6zQxwfninsvCThkMJEb1Y4ocR6Hu2Utrr1YPsY4lRUW7nHmpAx3q4g2Pjv66RG1MV+mJzNH246lFP6OLmjTGH0qy3XKKqtbuClefBFqBoj4cAaw796BAPzpsWbtW1lwhQ6Y4CtEHfee6Pm6AwqtU997gGVQ9+H/w1otZy37JXFmu/k9+WKENmoO8D1VB03Th719f5PnLnaP9F86uu92INIXRM1aDETCr8mQb/mQH1atyx80D801H+hnjJslZcpBbGehSLY3Mhb371h+5N9JuhatJNPF9sRP9RwwOhq+fiUM9AG/Tz+dqDe5jZhAlaem6KPePJUH4tr/pys3o3WfClebDtdU31twM5KLaahYICnKP5YCRBvvKHlespp+paAXAAYG2lZQsJYOK41EuCJNwW6mDnZg+ydneffrm6CkLU34RpMz3nRiZJPN5dk7B0Guirma0lCT7+PO7XIUZ4l/oqZ17ZBePx+IR56jT3Dkw91YtlH3K9hG0XqGxTx1T3EcqKfz5Zlzf0o/OwQfjdfGYysjhwWmbi4XBLW9jPdXAsNZxISp2PqkhY9M0YiOuujiik/RwtuRLO1wvaQwwkNmelmBvkFm1uFcDgSCYcDkVYhFonFwmMB0tshJOpMMX7plz4dMazk+OLhmltNr5wHPBFbHwn5Cceb+Xw0XeBj4ba4hw+Emp7B/jmSITDN4Mkp4ePxKM2/Vakh7XhTwb3GDZH1u90NQajYgH6F4INNGn4kilZYI7Rs7pTxltdue0VjB08DH0449qT1aTgcFC0WbVY20xL3wdRpxYwn6iVpQjK6OOHwDhLGBGBQ8+mBw822eLWG60nVA+axHaY1En4X84TjDnyLF95uKt6OJUBcmC+OzLG8pYMMVssv+ZkA8bEV7Az4y849hje/XmrMdsELyCeGoiZgklhialHdi5wUPhKP8XhpCWFJGmaF6CKiONQSt6ExfwFD/DTUo1EnH7cAHYQWfmKnoB62ey9Fo1Fb9pNrzqENsNshzEsnjGxc0mztF179lywAsXeRmk7Th80WPWjtOY1F1NfyATtBZTPlyTohgZUWfZfwa/17w8VFFBsn2qdyf8bod8lCJfEkrVCY8vHl9iVx25tbjOlI/iw4OVV1vo/2zUn4rpUjol6P1M2v07bTCvxwtA7+WeU6svr8d1dw1NqntuGR9fv6FD//0hf/kkp2fvlUSCz5lmEMKZqPynkhM9nLwWlpKTE6957BbbjqpokKjiBoSrEOXMD0AoE4JjShYKgcT7J1AxRU/CqwsWN2/afKYEv7Nkm9u9xpSr85/DhzSB96OGs3fshQpikTe3ODF5e0UM4G2hktDtdEzULRpHb3dQqWBy+bdfnSnrKYLzVPD6C0IP/6NZWA/IGeb33pvP+2sZdGFD899Dl9PS3oqjKeTgjijqCpBU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# UNITY (additional)



# UNITY (additional)





# 프로젝트 결과

- ☑ 약 2ha의 비교적 작은 범위를 모델링 대상으로 삼아, 수업에서 배운 드론 촬영 기법과 모델링 기술을 프로젝트에 무리 없이 적용할 수 있었음
- ☑ 모델링 결과, 특색 없던 동네 소공원을 독창적이고 매력적인 선사공원으로 탈바꿈시키는 데 성공함.
- ☑ 이를 통해 기존 공원 개발의 초기 목표였던 지역 상권 활성화를 다시 기대할 수 있는 가능성을 확인할 수 있었음



# 질의응답



무엇이든 물어보세요!!



발표를 마치겠습니다.

다음 시간에  
다시 만나요

